**Database Technologies for Web Applications**

**MASY1-GC3540** | **100** | **Fall 2024** | **09/09/2024 - 12/09/2024** | **3 Credits**

**Modality:** In-Person

Course Site URL: <https://brightspace.nyu.edu/d2l/home/374880>

**General Course Information**

**Name/Title:** Marc Bacchus, Adjunct Instructor

**NYU Email:** marc.bacchus@nyu.edu

**Class Meeting Schedule:** 09/09/2024 - 12/09/2024 | 6:20pm - 8:55pm | Mondays

**Class Location:** TBA

**Office Hours:** Contact me via email to make appointment.

**Description**

This course examines the database and related applications technologies that have come to be critical in the enablement of web-based applications for e-commerce in its many variations. This lab-based course provides an in-depth study of using database technologies in the context of the Internet, including Oracle, and open-source variations such as MySQL; the role of related scripting languages such as PHP. Also covered are the theory and practice involved in dynamic, database driven websites that are controlled using CSS and other web-enabling artifacts. Upon completion of this course, the student will understand the features of page scripting languages; understand the database options available for the web-based applications; explain how these can be combined with each other and with additional web-based tools to create effective web-based applications.

**Prerequisites**

3500 – Database Design and Management

**Learning Outcomes**

At the conclusion of this course, students will be able to:

* Construct HTML pages and specifically containing HTML grids and forms
* Integrate CSS with HTML to improve visual web page presentation
* Create database tables to support web interaction
* Construct an end-to-end database driven web application
* Develop PHP or Python code and integrate that with HTML and database to build web applications
* Select the appropriate features of page scripting languages and database options for web-based applications

**Communication Methods**

Be sure to turn on your [NYU Brightspace notifications](https://www.nyu.edu/servicelink/KB0018507) and frequently check the “Announcements” section of the course site. This will be the primary method I use to communicate information critical to your success in the course. To contact me, send me an email. I will respond within 24 hours.

**Structure | Method | Modality**

There are 14 session topics in this course. The session topics are organized into three (3) areas of study: 1) History, 2) Learning Principles, and 3) Instructional Design in Practice.

Active learning experiences and small group projects are key components of the course. Assignments, papers, and exams will be based on course materials (e.g., readings, videos), lectures, and class discussions. Course sessions will be conducted synchronously on NYU Zoom, which you can access from the course site in [NYU Brightspace](https://brightspace.nyu.edu/).

**Expectations**

Learning Environment

You play an important role in creating and sustaining an intellectually rigorous and inclusive classroom culture. Respectful engagement, diverse thinking, and our lived experiences are central to this course, and enrich our learning community.

Participation

You are integral to the learning experience in this class. Be prepared to actively contribute to class activities, group discussions, and work outside of class.

Assignments and Deadlines

Please submit all assignments to the appropriate section of the course site in [NYU Brightspace](https://brightspace.nyu.edu/). If you require assistance, please contact me BEFORE the due date.

Course Technology Use

We will utilize multiple technologies to achieve the course goals. I expect you to use technology in ways that enhance the learning environment for all students.

**Generative AI Use**

**Not permitted**

You can only learn from the work you do. Unless otherwise stated, you should not use generative AI tools to create any part of an assignment in this course; every submission should be entirely your work (for example from an NYU course).

This course assumes that work submitted by students – all process work, drafts, brainstorming artifacts, final works – will be generated by the students themselves, working individually or in groups as directed by class assignment instructions. As will any other class work generated by anyone other than the students (by other students, by a company, or by using generative AI tools), use can be a violation of Academic Integrity policy).

**Welcome on Specific Projects**

Where noted, you are allowed to use generative AI tools for assignments or activities. However, assignments created with AI should not exceed 25% of the overall work, and you must identify the portions where you used AI tools, and describe how you used them. Note that you are responsible for all parts of an assignment; if an AI tool provides incorrect information, it is your responsibility to find and fix the error before submitting. Note too that overreliance on AI can hinder independent thinking and creativity (example from an NYU course).

Use of ChatGPT (or other similar tools that generate text) is allowed in this class for specific assignments only. When use of the tool is allowed, it will be explicitly noted in the assignment directions. If you utilize ChatGPT for any part of the assignment (from idea generation to text creation to text editing), you must properly cite ChatGPT. Violations can result in failure of the assignment or failure of the course and a notation on your transcript).

Feedback and Viewing Grades

I will provide timely meaningful feedback on all your work via our course site in NYU Brightspace. You can access your grades on the course site Gradebook.

Attendance

I expect you to attend all class sessions. Attendance will be taken into consideration when determining your final grade. Refer to the [SPS Policies and Procedures page](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html) for additional information about attendance.

**Textbooks And Course Materials**

Throughout the course there are a number of readings used to support class discussions and class meetings. These readings can be found in the required books, as well as via links and downloads Brightspace. These readings are a part of the constant dialogue being generated throughout the course. You should be able to discuss all readings in an insightful and informed manner during class. Readings are considered a major part of the overall grade.

The books for this course can be found in the NYU bookstore and online at your favorite e-retailer:

[A Project Guide to UX Design: For User Experience Designers in the Field or in the Making (Second Edition)](https://www.amazon.com/Project-Guide-Design-experience-designers/dp/0321815386) © 2012, by Russ Unger and Carolyn Chandler [ISBN-13: 978-0321815385]

[The Non-Designer's Design Book 4th Edition © 2015](https://www.amazon.com/gp/product/B00PWDFWEE?pf_rd_p=c2945051-950f-485c-b4df-15aac5223b10&pf_rd_r=W5K8B89GM2APZE05Z292) by Robin Williams [ISBN-13: 978-0133966152]

[HTML & CSS - Visual QuickStart Guide (8th Edition) ©](https://www.amazon.com/HTML-CSS-Visual-QuickStart-Guide/dp/0321928830/ref=sr_1_1?keywords=html+and+css+visual+quick+start+castro+and+hyslop&qid=1566409861&s=gateway&sr=8-1) 2014 by Elizabeth Castro, Bruce Hyslop [ISBN-13: 978-0321928832]

**Grading | Assessment**

Your grade in this course is based on your performance on multiple activities and assignments. Since all graded assignments are related directly to course objectives and learning outcomes, failure to complete any assignment will result in an unsatisfactory course grade. All written assignments are to be completed using APA format and must be typed and double-spaced. Grammar, punctuation, and spelling will be considered in grading. Please carefully proof-read your written assignments before submitting them for a grade. I will update the grades on the course site each time a grading session has been completed— typically three (3) days following the completion of an activity.

DESCRIPTION PERCENTAGE

Assigned Activities (total of 10) 40%

Participation 10%

Midterm Exam 25%

Final Exam 25%

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TOTAL POSSIBLE 100%

See the [“Grades” section of Academic Policies](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html#Graduate1) for the complete grading policy, including the letter grade conversion, and the criteria for a grade of incomplete, taking a course on a pass/fail basis, and withdrawing from a course.

**NYU SPS Graduate Grading Scale**

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | 95-100 | 4.000 | **Exceptional:** Demonstrates exceptional mastery of all learning outcomes of the course and thorough and complete understanding of all concepts. |
| **A-** | 90-94 | 3.667 | **Excellent:** Demonstrates highly competent mastery of all learning outcomes of the course and strong understanding of all concepts. |
| **B+** | 87-89 | 3.333 | **Very Good; exceeds course standards:** Demonstrates mastery of all learning outcomes of the course and understanding of core concepts. |
| **B** | 83-86 | 3.000 | **Good; meets course standards:** Demonstrates mastery of some learning outcomes; understanding of some core concepts could be improved. |
| **B-** | 80-82 | 2.667 | **Somewhat Satisfactory;** meets some course standards and requires improvement: Demonstrates basic understanding of some learning outcomes; improved understanding of all core concepts is needed. |
| **C+** | 77-79 | 2.333 | **Less than Satisfactory; requires significant improvement:** Demonstrates partial understanding of all learning outcomes and core concepts; requires significant improvement. |
| **C** | 73-76 | 2.000 | **Unsatisfactory; requires substantial improvement:** Demonstrates partial understanding of some learning outcomes and core concepts; requires substantial improvement. |
| **C-** | 70-72 | 1.667 | **Unsatisfactory; requires extensive improvement:** Demonstrates poor understanding of all learning outcomes and core concepts; requires extensive improvement. |
| **F** | Below 70 |  | **Fail:** Demonstrates minimal to no understanding of all key learning outcomes and core concepts; work is unworthy of course credit towards the degree. |
| **P** |  |  | **Passing:** If a Pass/Fail grade is allowed, the choice of pass/fail must be made prior to the completion of the fifth week of the term. |

**Course Outline**

**Start/End Dates:** 09/09/2024 - 12/09/2024 | Mondays

**Time:** 6:20pm - 8:55pm

**No Class Date(s):** Monday, 10/14/2024

**Special Notes:** Tuesday 10/15/2024 – Legislative Monday: Classes will meet according to a Monday schedule on Tuesday, October 15, 2024

**Session 1, 09/09/24**

Topic description

* Intro to web and internet architecture
* Set up environment.

Assignments due

* None

**Session 2, 09/16/24**

Topic description

* HTML and page layout

Assignments due

* Homework 1 due

**Session 3, 09/23/24**

Topic description

* Styling the web page with CSS

Assignments due

* Homework 2 due

**Session 4, 09/30/24**

Topic description

* Advanced CSS

Assignments due

* Homework 3 due

**Session 5, 10/07/24**

Topic description

* Intro to JavaScript

Assignments due

* Homework 4 due

**Session 6, 10/14/24**

Topic description

* HTML Forms and validation

Assignments due

* Homework 5 due

**Session 7, 10/21/24**

Topic description

* Midterm Exam/Project

Assignments due

* Homework 6 due

**Session 8, 10/28/24**

Topic description

* Intro to Programming (PHP or Python (preferred))

Assignments due

* None

**Session 9, 11/04/24**

Topic description

* Processing Forms

Assignments due

* Homework 7 due

**Session 10, 11/11/24**

Topic description

* Database connections

Assignments due

* Homework 8 due

**Session 11, 11/18/24**

Topic description

* CRUD Operations

Assignments due

* Homework 9 due

**Session 12, 11/25/24**

Topic description

* Dashboard Design

Assignments due

* Homework 10 due

**Session 13, 12/02/24**

Topic description

* Final Exam

**Session 14, 12/09/24**

Topic description

* Final Group Presentation

**NOTES:**

The syllabus may be modified to better meet the needs of students and to achieve the learning outcomes.

The School of Professional Studies (SPS) and its faculty celebrate and are committed to inclusion, diversity, belonging, equity, and accessibility (IDBEA), and seek to embody the IDBEA values. The School of Professional Studies (SPS), its faculty, staff, and students are committed to creating a mutually respectful and safe environment (*from the* [*SPS IDBEA Committee*](https://www.sps.nyu.edu/homepage/about-us/idbea/about-idbea.html)).

**New York University School of Professional Studies Policies**

1. Policies - You are responsible for reading, understanding, and complying with [University Policies and Guidelines](http://www.nyu.edu/about/policies-guidelines-compliance.html), [NYU SPS Policies and Procedures](http://sps.nyu.edu/academics/academic-policies-and-procedures.html), and [Student Affairs and Reporting](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/student-services.html).

2. Learning/Academic Accommodations - New York University is committed to providing equal educational opportunity and participation for students who disclose their dis/ability to the [Moses Center for Student Accessibility](https://www.nyu.edu/students/communities-and-groups/student-accessibility.html). If you are interested in applying for academic accommodations, contact the [Moses Center](https://www.nyu.edu/students/communities-and-groups/student-accessibility/academic.html) as early as possible in the semester. If you already receive accommodations through the Moses Center, request your accommodation letters through the [Moses Center Portal](https://www.nyu.edu/students/communities-and-groups/student-accessibility.html) as soon as possible ([mosescsa@nyu.edu](mailto:mosescsa@nyu.edu) | 212-998-4980).

3. Health and Wellness - To access the University's extensive health and mental health resources, contact the [NYU Wellness Exchange](https://www.nyu.edu/students/health-and-wellness/wellness-exchange.html). You can call its private hotline (212-443-9999), available 24 hours a day, seven days a week, to reach out to a professional who can help to address day-to-day challenges as well as other health-related concerns.

4. Student Support Resources - There are a range of resources at SPS and NYU to support your learning and professional growth. For a complete list of resources and services available to SPS students, visit the [NYU SPS Office of Student Affairs site](https://www.sps.nyu.edu/homepage/student-experience/resources-and-services.html).

5. Religious Observance - As a nonsectarian, inclusive institution, NYU policy permits members of any religious group to absent themselves from classes without penalty when required for compliance with their religious obligations. Refer to the [University Calendar Policy on Religious Holidays](https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-calendar-policy-on-religious-holidays.html) for the complete policy.

6. Academic Integrity and Plagiarism - You are expected to be honest and ethical in all academic work. Moreover, you are expected to demonstrate how what you have learned incorporates an understanding of the research and expertise of scholars and other appropriate experts; and thus recognizing others' published work or teachings—whether that of authors, lecturers, or one's peers—is a required practice in all academic projects.

Plagiarism involves borrowing or using information from other sources without proper and full credit. You are subject to disciplinary actions for the following offenses which include but are not limited to cheating, plagiarism, forgery or unauthorized use of documents, and false form of identification

[Turnitin](https://www.nyu.edu/servicelink/KB0018471), an originality detection service in NYU Brightspace, may be used in this course to check your work for plagiarism.

Read more about academic integrity policies at the NYU School of Professional Studies on the [Academic Policies for NYU SPS Students](https://www.sps.nyu.edu/homepage/student-experience/policies-and-procedures.html) page.

7. Use of Third-Party Tools - During this class, you may be required to use non-NYU apps/platforms/software as a part of course studies, and thus, will be required to agree to the “Terms of Use” (TOU) associated with such apps/platforms/software.

These services may require you to create an account but you can use a pseudonym (which may not identify you to the public community, but which may still identify you by IP address to the company and companies with whom it shares data).

You should carefully read those terms of use regarding the impact on your privacy rights and intellectual property rights. If you have any questions regarding those terms of use or the impact on the class, you are encouraged to ask the instructor prior to the add/drop deadline.