

# DIG2005 Introduction to Digital Technologies

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**Instructor**

Prof Marko Suvajdzic

**Phone**

(352) 294-2000

**Email**

Canvas Mail

**Office Location**

Discord

**Office Hours**

Wednesdays 1 – 3 PM

**Course Number**

DIG2005

**Semester/Year**

Fall 2020

**Course Credits**

3 credits

**Course Location**

ONLINE

**Course Meeting Times**

TUE Period 5-6

THURS Periods 6

**Course Description**

This course offers a comprehensive introduction to fundamental concepts in digital technology and computing. The topics to be covered are history of computing, binary arithmetic, Boolean logic, computer architecture, databases, networking, current technological trends, AI, blockchain, machine learning, IOT and ethics.

**Pre-Requisites**

None

**Objectives: By the end of this course, students will be able to:**

- Analyze impacts of historical figures who pioneered in computing and their achievements
- Calculate in binary system and convert between binary, decimal, and hexadecimal systems
- Read and write logical statements in Boolean expressions
- Describe the main components of hardware and describe their operation
- Describe database systems and compose database queries
- Apply principles of networking protocols
- Manifest understanding of current technology trends (AI, blockchain, machine learning, IOT)

**Required Materials**

- *Computer Fundamentals* by Anita Goel, 2010, ISBN: 978-8131733097
- *Tech Trends in Practice: The 25 Technologies that are Driving the 4th Industrial Revolution* by Bernard Marr, 2020, ISBN: 978-1119646198

**Recommended Materials**

- Selection of online articles and videos

# Course Schedule

This schedule is only a guide and is subject to change. Unless otherwise indicated, assignments and readings are due the day they are listed on the syllabus, not the following day.

Week	Subject	Assignment/Quizzes
Week 1	Introduction to the class What is <i>digital</i> (analog vs. digital)? What is <i>technology</i> ? History of Computing/Internet	No quiz
Week 2	Hardware – from electricity to hardware to software	Quiz 1
Week 3	Binary Arithmetic Boolean Logic	Quiz 2
Week 4	Computer Architecture Quantum computing	Quiz 3
Week 5	IOT - Introduction to principles and uses BIG DATA - Introduction to principles and uses	Quiz 4
Week 6	VR/AR - Introduction to principles and uses In class discussion	Quiz 5
Week 7	AI - Introduction to principles and uses  In class discussion	Quiz 6
Week 8	Blockchain - Introduction to principles and uses  In class discussion	Midterm Exam (all topics covered in weeks 1-8).
Week 9	Databases and MySQL queries	Quiz 7
Week 10	Databases and MySQL queries (cont.)	Quiz 8
Week 11	Networking Protocols	Quiz 9
Week 12	Networking Protocols (cont.)	Quiz 10
Week 13	Review week	Quiz 11
Week 14	Careers in Digital Technologies	Quiz 12
Week 15	Ethics and the Future of Computing	
Week 16	Review and preparation for Final Exam	No quiz

## Evaluation of Grades

Assignment	Total Points	% of Grade
Weekly Quizzes	600	60%
Midterm Presentations	200	20%
Final Exam	200	20%

## Grading Scale

Letter Grade	% Equivalency	GPA Equivalency
A	94 – 100%	4.0
A-	90 – 93%	3.67
B+	87 – 89%	3.33
B	84 – 86%	3.00
B-	80 – 83%	2.67
C+	77 – 79%	2.33
C	74 – 76%	2.00
C-	70 – 73%	1.67
D+	67 – 69%	1.33
D	64 – 66%	1.00
D-	60 – 63%	.67
E, I, NG, S-U, WF	0 – 59%	0.00

More information on grades and grading policies is here:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

### Materials and Supply Fees

Material and supply and equipment use fee information is available from the academic departments or from the schedule of courses (Florida Statutes 1009.24). The total course fee for this class is \$0.00.

The total course fee for each course is listed on the UF Schedule of Courses. (<https://registrar.ufl.edu/soc/>).

## Course Policies

### Attendance Policy, Class Expectations, Privacy Policy, and Make-Up Policy

We value participation more than mere attendance. The instructor is responsible for communicating the specific details of what percentage of your grade (if any) will be assigned to participation, and how class participation will be measured and graded. Interaction with your peers and the instructor will empower you to greater achievement.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at: <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

### **Course Technology**

The students will be required to have access to and use a personal computer with the access to the Internet. Word editing software will be required for written assignments.

The University of Florida and Digital Worlds requires that students have access to and on-going use of a laptop/mobile computer for DIG courses in order to be able to function in the current learning environment. Digital Worlds requires each student's laptop computer to meet certain minimum specs for heavy graphics use, the requirements documented below must be met.

### DW Technology Requirements

### **Course Communications**

Students can communicate directly with the instructor regarding the course material through the course management system (CANVAS) using "Canvas Mail".

### **Course Recordings**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

## **Course Technology Support**

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The [Technology Support Center](http://digitalworlds.ufl.edu/support) provides computer support for Digital Worlds students who access Zoom, lecture recordings, student equipment, facilities and other technology-based resources.  
<http://digitalworlds.ufl.edu/support>

For computer assistance related to Zoon, lecture recordings, student equipment, and facilities request please [Submit a Help Ticket](#) or email [support@digitalworlds.ufl.edu](mailto:support@digitalworlds.ufl.edu).

For support related to account services, technical consulting, mobile device services, software services, administrative support, application support center, and learning support services, please contact the [UF Computing Help Desk](#) available 24 hours a day, 7 days a week at 352-392-4357 or [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

## UF Policies

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### University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

### Class Demeanor

Students are expected to arrive to class on time and behave in a manner that is respectful to the instructor and to fellow students. Please avoid the use of cell phones and restrict eating to outside of the classroom. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

### Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center. [Click here to get started with the Disability Resource Center](#). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### Netiquette Communication Courtesy

All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats, more information can be found at: <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

### Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

### Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

### Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. [Click here for guidance on how to give feedback in a professional and respectful manner](#). Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via [ufl.bluera.com/ufl/](http://ufl.bluera.com/ufl/). Summaries of course evaluation results are available to students [here](#).

## Campus and Academic Resources

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***U Matter, We Care:*** If you or someone you know is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu), 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

***Counseling and Wellness Center:*** [Visit the Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

***Student Health Care Center:*** Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [Student Health Care Center website](#).

***University Police Department:*** [Visit UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

***UF Health Shands Emergency Room / Trauma Center:*** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; [Visit the UF Health Emergency Room and Trauma Center website](#).

***E-learning technical support:*** Contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

***Career Connections Center:*** Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

***Library Support:*** Various ways to receive assistance with respect to using the libraries or finding resources.

***Teaching Center:*** Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

***Writing Studio:*** 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

***Student Complaints On-Campus:*** [Visit the Student Honor Code and Student Conduct Code webpage for more information](#).

***On-Line Students Complaints:*** [View the Distance Learning Student Complaint Process](#).

*Disclaimer: This syllabus represents the instructor's current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.*