

# CSCI160 COMPUTER ARCHITECTURE I HUNTER COLLEGE CITY UNIVERSITY OF NEW YORK

Spring 2022 Monday and Wednesday 5:35 PM to 6:50 PM IN PERSON in the Hunter West 3rd Floor Student Dining Room. However, in order to prepare for potential contingencies, several lectures throughout the semester will take place on BlackBoard Collaborate TBA

## SYLLABUS

**GRADESCOPE** [entry code 4PBYXW]

## INSTRUCTOR

**Genady Maryash** gmaryash@hunter.cuny.edu office hours Monday and Thursday 4:15 PM to 5:15 PM to on BlackBoard Collaborate.

## TUTORS

**Steven** [calendly.com/steven-palomino/csci160-office-hours](https://calendly.com/steven-palomino/csci160-office-hours)

**Shafali** [calendly.com/shafali-gupta21/csci-160-office-hours-shafali](https://calendly.com/shafali-gupta21/csci-160-office-hours-shafali)

**Daniel** [calendly.com/daniel-elkik26/160-office-hours](https://calendly.com/daniel-elkik26/160-office-hours)

**Andy** [calendly.com/andy-mina30/office-hours/](https://calendly.com/andy-mina30/office-hours/)

## TEXTBOOK

**Digital Design, 6th Edition eText**, Mano, Ciletti ISBN-9780134529561. It can be purchased at a discounted price (\$54.99) direct from the publisher through [Vitalsource.com](https://www.vitalsource.com) in order for the chapter links to work. Do not buy any other electronic version of this edition of the book. Of course, you may be able to find prior editions of this book for less – you will simply have to match the reading assignments to those older editions.

## OTHER RESOURCES

**Circuit Builder Simulator**

## COURSE OUTLINE

DATE	TOPIC	READINGS	SLIDES
1/31	Introduction	<a href="#">Syllabus</a>	
2/2	Binary Numbers	<a href="#">1.2 Binary Numbers</a>	<a href="#">Class 1</a>
2/7	Radix Conversions	<a href="#">1.3 Number Base Conversions</a> <a href="#">1.4 Octal and Hexadecimal</a>	<a href="#">Class 2</a>

DATE	TOPIC	READINGS	SLIDES
		Numbers	
2/9	HW Review &	<b>TEST 1</b>	
2/14	Complements of Numbers	1.5 Complements of Numbers 1.6 Signed Binary Numbers	Class 3
2/16	Binary Codes	1.7 Binary Codes 1.9 Binary Logic	Class 4
2/23	Boolean Algebra	2.2 Basic Definitions	Class 5
2/28	Axioms	2.3 Axiomatic Definition	Class 6
3/2	Functions and Proofs	2.4 Theorems and Properties 2.5 Boolean Functions	Class 7
3/7	More Boolean Algebra	2.7 Other Logic Operators <b>Test 2</b>	Class 8
3/9	Logic Gates	2.8 Digital Logic Gates	Class 9
3/14	Midterm Review	Midterm Review	
~~~~	~~~~~	~~~~~	~~~~~
3/16	Canonical vs Standard	2.6 Canonical and Standard Forms	Class 10
3/21	<b>Midterm Exam</b>		
3/23	Gate Level Minimisation	3.2 The Map Method 3.3 Four-Variable K-Map TB K-Map Method	Class 11 K-Map Torus
<b>ONLINE</b> <b>3/28</b>	<b>BB COLLABORATE</b> 5-Var K-map	4.3 Analysis of Combinational Circuits	TB KMaps Class 12
3/30	7-Segment Display	3.5 Don't-Care Conditions	Class 13

DATE	TOPIC	READINGS	SLIDES
4/4	Tabulation Method	Quine-McCluskey Tabular Method	Class 14
4/6	Prime Implicant Table	Prime Implicant Table <b>Test 3</b>	Class 15
4/11	More P.I.T. , Adders	4.4 Design Procedure	Class 16
4/13	Subtractors	4.5 Binary Adders and Subtractors	Class 17
	SPRING	BREAK	
4/25	Comparator & Controlled Input	4.11 Multiplexers	Class 18 FlipFlops
4/27	<b>Test 4</b> Flip-Flops, Clock	5.4 Storage Elements: FlipFlops	Class 19
5/2	Racing Fix JK Flip-Flop	<i>Racing Problem Animation</i> <i>J K FlipFlop Animation</i>	Class 20
5/4	State Diagrams	Four-Variable K-Map Review	Class 21
5/9	State Equations, Finite State Machines	5.5 Analysis of Clocked Sequential Circuits	Sequential Circuit & Equations State Table for Circuit State_Table_and_Diagram Equations_and_FSMs Input_Equations States_D_FlipFlop In_Mealy_FSM_output_is_function
5/11			
5/16	Exam Review		
<b>5/18</b>	<b>Final Exam</b>	<b>Wednesday</b>	<b>5:20 – 7:20</b>

**Instructor Evaluations:**

**Computer:** [www.hunter.cuny.edu/te](http://www.hunter.cuny.edu/te)

**Smartphone:** [www.hunter.cuny.edu/mobilete](http://www.hunter.cuny.edu/mobilete)

---

---

---