



Course Specification

(Bachelor)

Course Title: **Computing Fundamentals and Ethics**

Course Code: **CS 1111**

Program: **Bachelor of Computer Science**

Department: **Computer Science**

College: **College of Computer and Information Sciences**

Institution: **Imam Mohammad Ibn Saud Islamic University**

Version: **2.0**

Last Revision Date: **27 May 2025**

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A. General information about the course:

1. Course Identification

1. Credit hours: (3 Hours)

2. Course type

A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (Level 1/ Year 1)

4. Course General Description:

This course offers a foundational exploration of computing, encompassing essential topics such as computer hardware, operating systems, programming fundamentals, networking basics, and cybersecurity principles. Students will be introduced to basic programming concepts, understand the structure and function of computer networks, and delve into the ethical and societal implications of technology. Additionally, the course highlights emerging trends in computing, preparing students to navigate and contribute to the evolving digital landscape.

5. Pre-requirements for this course (if any):

N/A

6. Co-requisites for this course (if any):

N/A

7. Course Main Objective(s):

- Comprehend Core Computing Fundamentals and Emerging Trends
- Develop Foundational Programming and Problem-Solving Skills
- Understand the ethical and societal impacts of computing

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	60	100%
2	E-learning	0	0
3	Hybrid • Traditional classroom	0	0





No	Mode of Instruction	Contact Hours	Percentage
	• E-learning		
4	Distance learning	0	0

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	30
2.	Laboratory/Studio	0
3.	Field	0
4.	Tutorial	15
5.	Others (specify)	0
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Identify the organization of computers and how data is represented within them.	K1	In-class lectures & related activities	Direct Assessment(Q uizzes, Mid, Final Exam)
1.2	Recognize the main concepts of computer science topics	K1	In-class lectures & related activities	Direct Assessment(Q uizzes, Mid, Final Exam)
1.3	Define the fundamental concepts of computer ethics	K3	In-class lectures & related activities	Direct Assessment(Quizzes, Mid, Final Exam)
2.0	Skills			
2.1	Analyze the problem and plan the solution	S2	In-class lectures & related activities	Direct Assessment(





Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	by designing the algorithm.			Quizzes, Mid, Final Exam)
2.2	Translate the solution plan to an executable program	S2	In-class lectures & related activities	Direct Assessment(Quizzes, Mid, Final Exam)
3.0	Values, autonomy, and responsibility			
3.1	Work effectively in team to accomplish a written/oral report	V2	In-class discussions of sample reports	Direct Assessment (Assignment)
3.2	Realize the responsibilities and ethical, legal, security, and social issues associated with the professional practice	V1	In-class lectures & related activities	Direct Assessment(Quizzes, Mid, Final Exam)

C. Course Content

No	List of Topics	Contact Hours
	Introduction to Course	2
2.	Data Representation	4
3.	Algorithms, Problem Solving, and Programming	20
4.	Computer Components	3
5.	Operating Systems	3
6.	Networks, Internet, and WWW	2
7.	Artificial Intelligence	1
8.	Software Development	1
9	Limitations of Computing	1
10	Trending Topics in CS (e.g. IoT)	1
11	Privacy and Data Protection	1
12	Intellectual Property	1





13	Computer Crime and Security	1
14	Artificial Intelligence and Machine Learning Ethics	1
15	Social Impact and Digital Divide	1
16	Professional Ethics and Responsibility	1
17	Environmental Impact of Computing	1
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Assignment	13	10%
2.	Midterms	7, 11	40%
3.	Quiz	14	10%
4.	Final Exam	Final Exam Week	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Dale, Nell, and John Lewis. Computer Science Illuminated. 8th ed., 2023 Ethics for the Information Age, By Michael Jay Quinn, 2024
Supportive References	N/A
Electronic Materials	Lecture Slides and related study material shared on Blackboard
Other Learning Materials	N/A

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture room with at least 35 seats
Technology equipment (projector, smart board, software)	- A projector connected to a PC preferably with Internet connection. - Sliding board



Items	Resources
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students and Program Leaders	Students feedback (collected through course evaluation surveys). Reviewing course reports by the program leaders.
Effectiveness of students assessment	Instructors and Program Leaders	Course report submitted by instructors. Reviewing course reports by the program leaders.
Quality of learning resources	Students, Instructors, and Program Leaders	- Students feedback (collected through course evaluation surveys). - Course report submitted by instructors. Reviewing course reports by the program leaders.
The extent to which CLOs have been achieved	Instructors and Program Leaders	Direct assessments for students' grades related to CLOs. Reviewing course reports by the program leaders.
Effectiveness of the course improvement plans	Program Leaders	Reviewing Course Specification and Reports by program leaders.

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	COMPUTER SCIENCE DEPARTMENT COUNCIL
REFERENCE NO.	



DATE

