

Admission Exam Announcement for PhD Program – Computer Science Department (Spring 2026)

The Faculty of Computing and Information Technology announces the admission exam schedule for the PhD program in the **Computer Science Department** for **Spring 2026**.

Please find the details below:

Exam Date and Time:

- **Day:** Thursday
- **Date:** 7th of May, 2026
- **Time:** From 11:00 AM to 2:00 PM

Exam Locations:

- **Female Students:**
 - Location: Lab No. 122 and 123, Female Campus, Building 61 – King Abdulaziz University (KAU), Jeddah.
- **Male Students:**
 - Location: Lab No. L0-15, Faculty of Computing and Information Technology (FCIT), Building 080B – King Abdulaziz University (KAU), Jeddah.

Contact Information:

- Male Campus fcit.dcs@kau.edu.sa
- Female Campus fcitg-cs@kau.edu.sa

PhD Admission Exam Syllabus – Computer Science Department

The following outlines the syllabus, including weight, textbooks, topics covered, and specific chapters for each subject.

Discrete Structure

Weight: 12.5%

Textbook: Discrete Mathematics and Its Applications, McGraw-Hill, 7th edition (2006). ISBN: 978-0073383095

Topics Covered: Functions, relations, and sets; Basic logic; Proof techniques; Basics of counting and number theory; Graphs and trees; Discrete probability

Chapters: Chapter 1, Chapter 6 (6.1, 6.3), Chapter 7, Chapter 10, Chapter 11

Programming

Weight: 12.5%

Textbook: Java How To Program (Late Objects), Pearson, 10th Edition. ISBN: 978-0132575652

Topics Covered: Programming fundamentals; Basic algorithms and problem-solving; Fundamental data structures; recursion, and object-oriented programming

Chapters: Chapters 1-11, 18, and 19

Algorithms and Complexity

Weight: 12.5%

Textbook: Introduction to the Design and Analysis of Algorithms, Pearson Education, 3rd Edition. ISBN: 9780273764113

Topics Covered: Advanced data structures and algorithms; Algorithmic strategies; Distributed algorithms; Basic computability and complexity

Chapters: Chapters 1-7

Architecture

Weight: 12.5%

Textbook: Computer Organization and Design, David Patterson and John Hennessy, 4th Edition. eBook ISBN: 9780080922812

Topics Covered: Digital logic and digital systems; Machine-level representation of data; Assembly-level machine organization; Interfacing and communication

Chapters: Chapters 1-6

Operating Systems

Weight: 12.5%

Textbook: Operating System Concepts, 10th Edition, by Abraham Silberschatz et al., John Wiley & Sons Inc

Topics Covered: Operating system principles; Concurrency; Scheduling and dispatch; Memory management

Chapters: Chapters 1, 5-7, 9, and 10

Networking

Weight: 12.5%

Textbook: Computer Networking: A Top-Down Approach, by James F. Kurose and Keith W. Ross, 6th Edition

Topics Covered: OSI layer; TCP/IP protocol; Wired and wireless LAN technologies; IP addressing; Routing and switching algorithms

Chapters: Chapters 1-6

Software Engineering

Weight: 12.5%

Textbook: Object-Oriented Software Engineering: An Agile Unified Methodology, McGraw-Hill, 2014. ISBN: 978-0073376257

Topics Covered: Software requirements, specifications, design, validation, and management

Chapters: Chapters 4, 5, 7, 9, 13, 14, 20, and 23

Database Systems

Weight: 12.5%

Textbook: Fundamentals of Database Systems, by Ramez Elmasri and Sham Navathe, Addison-Wesley, 6th Edition (2011)

Topics Covered: Database systems and data modeling

Chapters: Chapters 2, 3, and 7