

## Year of Study IV

### Semester 1

CSC411 Computer Network Security  
CSC412 Knowledge-based Systems  
CSC413 Business Management & Entrepreneurship  
CSC414 ICTs and Society  
CSC416 Computer Systems Project  
One Elective from group I

### Semester 2

CSC416 Computer Systems Project  
Three Elective (from Group II)

### GROUPS OF ELECTIVES

#### Group I

CSC421 Introduction to Language Technologies  
CSC422 Design Thinking  
CSC423 Wireless Networks and Mobile Computing

#### Group II Electives

#### Net-Centric

CSC431 Network Management  
CSC432 Service-oriented Computing  
CSC433 Multimedia Technologies

#### Intelligent Systems

CSC441 Knowledge Engineering and Society  
CSC442 Knowledge Discovery and Data Mining  
CSC443 Advanced Language Technologies  
CSC444 Multi-agent Systems

#### Information Systems

CSC451 Distributed Databases  
CSC452 Information Systems Control and Audit  
CSC453 Social Network Computing  
CSC454 Strategic Information Systems

#### Computer Architecture

CSC461 Performance Modelling  
CSC462 Advanced Computer Architecture  
CSC463 Embedded Systems

#### HCI

CSC471 Interaction Design for Coll. and Comm.

#### Graphics and Visual Computing

CSC481 Computer Games Programming

### FEES FOR THE COURSE (in KShs.)

ITEM	UNITS	COST/UNIT	TOTAL
Tuition	52	18,000	936,000
ITEM	PER YR	NO. OF YRS	TOTAL
Comp Lab	5,000	4	20,000
Exam	5,000	4	20,000
Medical	5,000	4	20,000
Activity Fee	2,000	4	8,000
Registration	1,000	4	4,000
ID Card	500	4	2,000
Student Org	1,000	4	4,000
Caution	5,000		5,000
<b>Subtotal</b>			<b>83,000</b>
<b>TOTAL</b>			<b>1,019,000</b>

- The fee is payable per semester installments, approximately KShs. 132,000.
- Foreign students to pay additional 25%

### How to Apply

Application is done online via the University application website <http://application.uonbi.ac.ke>

### For More Information Please Contact:

The Director

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SCHOOL OF COMPUTING AND INFORMATICS

BACHELOR OF SCIENCE IN

COMPUTER SCIENCE



UNIVERSITY OF NAIROBI

## PROGRAMME OBJECTIVES

Facilitate acquisition, adoption and adaptation of Computer Science knowledge, techniques and tools.

Develop graduates with the ability to apply Computer Science knowledge, skills, techniques and tools to create best-possible solutions to practical problems of varying complexity, in a wide range of contexts.

Develop graduates who are innovative and creative, who possess good problem-solving skills and are capable of life-long learning.

Develop all-rounded graduates with demonstrable ethical and professional behaviour, and who possess effective communication, management, entrepreneurial and interpersonal skills.

## ADMISSION REQUIREMENTS

Candidates must satisfy the University's general admission criteria

Eligibility for consideration for admission into the degree of Bachelor of Science in Computer Science in the School of Computing and Informatics is governed by the following minimum admission requirements or an equivalent qualification recognized by Senate:

### KCSE Candidates

Candidates must have obtained minimum grade of C+ in the following cluster subjects:

Cluster 1: Mathematics

Cluster 2: Physics

Cluster 3: Second Group II or Any Group III

Cluster 4: Any Group II/Group III/Group IV/Group V

### A-Level Candidates

Candidates with 2 principal passes, one of which must be in Mathematics or Physics, and a subsidiary pass with a Credit pass in Physics at 'O' level.

### Diploma in Computer Studies

Candidates with Ordinary Diploma in Computer Studies or equivalent with, a pass at Credit level, from an institution recognized by Senate.

### Higher Diploma in Computer Studies

Candidates with Higher Diploma in Computer Studies or equivalent from an institution recognized by Senate.

### Bachelor's Degree

Candidates with a Bachelor's degree from an institution recognized by Senate.

## CREDIT TRANSFER AND EXEMPTIONS

The point of entry into the programme for candidates other than direct KCSE will be approved by Senate on recommendations of SCI Board and will be based on the qualification of the candidate.

Where a candidate wishes to be exempted from any course unit(s), the candidate will send an application to the Academic Registrar justifying the request and provide evidence of the credentials which support such a request. Such a candidate may be required to sit and pass an ordinary university examination in that course unit.

A candidate, who has taken and passed a course unit offered within another degree programme, may apply for transfer of credit earned within the former programme to this programme.

The total number of units that may be transferred plus those exempted may not exceed one third of the total number of units prescribed in this programme.

## COURSE STRUCTURE AND DURATION

The course will extend over a minimum period of 8 semesters and a maximum period of 16 semesters. Each academic year will have at least two semesters.

The Second Year Projects shall be equivalent to two course units.

The Industrial Attachment shall be equivalent to two course units.

The Fourth Year Project shall be equivalent to four course units.

The course is organized into Knowledge Areas.

## INDUSTRIAL ATTACHMENT

The Student will undertake Industrial Attachment for a period of 8 weeks between semester 2 of year three and semester 1 of year four, in accordance to the School's guidelines on Industrial Attachment.

## COURSE OUTLINE

### Year of Study I (Compulsory Units)

#### Semester 1

CSC111 Introduction to Computer Systems  
CSC112 Introduction to Programming  
CSC113 Discrete Mathematics  
CSC114 Differential and Integral Calculus  
CCS001 Communication Skills  
CCS009 Economics

### Semester 2

CSC121 Programming and Problem-solving  
CSC122 Database Systems  
CSC123 Data Communications  
CSC124 Probability and Statistics  
CSC125 Linear Algebra  
CSC126 Physics for Computing Systems  
CCS010 HIV/AIDS

### Year of Study II (Compulsory Units)

#### Semester 1

CSC211 Data Structures and Algorithms  
CSC212 Systems Analysis and Design  
CSC213 Computer Architecture  
CSC214 Digital Electronics  
CSC215 Intro to Artificial Intelligence  
CSC216 Assembly Language Programming  
CSC217 Web Programming and Applications

#### Semester 2

CSC221 OO Analysis Design and Programming  
CSC222 Automata Theory  
CSC223 Operating Systems  
CSC224 Software Engineering  
CSC225 Computer Networks  
CSC226 Computer Systems and Networking Lab  
CSC227 Programming Project

### Year of Study III (Compulsory Units)

#### Semester 1

CSC311 Analysis and Design of Algorithms  
CSC312 Artificial Intelligence Programming  
CSC313 Foundations of Human Computer Interaction  
CSC314 Computer Graphics  
CSC315 Distributed Systems  
CSC316 Intro to Organizations and Management

#### Semester 2

CSC321 ICT Project Management  
CSC322 Network and Distributed Programming  
CSC323 Machine Learning  
CSC324 User-Centred Development and Evaluation  
CSC325 Management Information Systems  
CSC326 Compiler Construction

### Industrial Attachment

CSC331 Industrial Attachment (8 weeks)