

BSc IN INFORMATICS (TAUGHT IN BULGARIAN)

The brief program's presentation:

Teaching courses in the program during the first two years covering general education; the basic scientific courses are teaching in two semesters: Mathematics, Fundamentals of Informatics, Statistics, Electronics, Introduction to algorithms and programming, Fundamentals of Law; practical courses such as Programming in C++, The Java programming language, Operating Systems, Computer Architecture, Networks and Communications, Advanced programming, Object-Oriented Programming, etc. During the third and fourth year courses are organized in specialized courses and extracurricular learning modes. In the fourth year the program offers two specializations that lead to professional qualifications.

Education and Professional qualifications:

Specialization: Applied Informatics

Subject: Informatics

Professional qualifications: informatics

Specialization: Computer programming

Subject: informatics

Professional qualifications: informatics

Practical training:

Practical training includes work in HP laboratory, a laboratory informatics the NBU, as well as internships in companies for the production of the software, IT departments.

International mobility:

The program provides opportunity for the international student mobility with universities in United Kingdom, France, Belgium and Germany.

Competence of Graduates:

- Knowledge of the theoretical foundations of Informatics, using several programming languages;
- The ability to use different platforms and technologies for the software development ; to design information models, to develop and to administer information systems.

Graduation:

Students graduate the Bachelor programme with the Bachelor's thesis or passing the State exam after covering the required number of credits. Besides program training students can get additional specialization by enrolling in Minor-program (the second specialization).

The manner and conditions of graduation are in accordance with the "Standard for the degree graduation."

Qualification and possible professional positions:

Program graduated student can take the following professional positions: an information and communication technologies specialist; a system analyst, a software developer, an application programmer, a database designer and a database administrator, a Web developer.

Department proposed program: Informatics

Program directors:

assist. prof. **Desislava Georgieva**, PhD

Office hours:

Tuesday: 11:30 - 13:30

Wednesday: 09:30 - 11:30

Thursday: 09:00 - 11:00

e-mail: **dvelcheva@nbu.bg**

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Office: Bilding 2, room 610

assoc.prof. **Angel Angelov**, PhD

Office hours:

Monday: 11:10 - 13:10

Tuesday: 11:10 - 13:10

Friday: 11:10 - 13:10

e-mail: **cst_director@abv.bg**

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Office: Bilding 2, room 610

assist. prof. **Valentina Ivanova**, PhD

Office hours:

Tuesday: 11:00 - 12:30

Thursday: 11:30 - 14:00

Friday: 11:30 – 13:30

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Office: Bilding 2, room 610

assist. prof. **Yoana Minkova**, PhD

Office hours:

Monday: 12:00 - 16:30

Tuesday: 11:30 - 13:30

Thursday: 12:30 - 14:30

e-mail: **yminkova@nbu.bg**

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Office: Bilding 2, room 610

assist. prof. **Filip Andonov**, PhD

Office hours:

Tuesday: 11:00 - 13:00

Wednesday: 11:00 - 13:00

Thursday: 11:00 - 13:00

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Office: Bilding 2, room 610

Year I

Semester I

Compulsory courses (1 from 1)

GENB005 Fundamentals of Informatics

assoc.prof. Petya Asenova, PhD, assist. prof. Valentina Ivanova, PhD

30 hours, 1/2, 3 credits

Compulsory-elective courses (1 from 2)

GENB006 Introduction to algorithms and programming

assoc.prof. Velina Slavova, PhD, assist. prof. Filip Andonov, PhD

30 hours, 1/2, 3 credits

GENB037 Introduction to electronic communications and telecommunications technology

prof. Stefan Kutsarov, D.Sc., assist. prof. Tereza Stefanova, PhD

30 hours, 1/2, 3 credits

Practical courses of the program - with credits (2 from 3)

CSCB109 Programming

assoc.prof. Stanislav Ivanov, PhD

30 hours, 3 credits

CSCB110 Labs of Programming

assist. prof. Filip Andonov, PhD, assist. prof. Mariana Raikova-Sokolova, PhD

30 hours, 3 credits

CSCB111 C++ applications

assist. prof. Mariana Raikova-Sokolova, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 1)

CSCB021 Discrete Mathematics

prof. Ivan Landjev, D.Sc., assist. prof. Stoyan Boev, PhD

30 hours

Semester II

Compulsory courses (1 from 1)

GENB005 Fundamentals of Informatics

assoc.prof. Petya Asenova, PhD, assist. prof. Valentina Ivanova, PhD

30 hours, 2/2, 3 credits

Compulsory-elective courses (1 from 2)

GENB006 Introduction to algorithms and programming

assoc.prof. Velina Slavova, PhD, assist. prof. Filip Andonov, PhD

30 hours, 2/2, 3 credits

GENB037 Introduction to electronic communications and telecommunications technology

prof. Stefan Kutsarov, D.Sc., assist. prof. Tereza Stefanova, PhD

30 hours, 1/2, 3 credits

Practical courses of the program - with credits (2 from 3)

CSCB022 Combinatorics

prof. Ivan Landjev, D.Sc., assist. prof. Stoyan Boev, PhD

30 hours, 3 credits

CSCB023 Automata and computability

assoc.prof. Krasimir Manev, PhD, assist. prof. Stoyan Boev, PhD

30 hours, 3 credits

CSCB209 Object-Oriented Programming

assoc.prof. Stanislav Ivanov, PhD, assist. prof. Mariana Raikova-Sokolova, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 1)

CSCB210 Labs of Object-Oriented Programming

assoc.prof. Stanislav Ivanov, PhD, assist. prof. Mariana Raikova-Sokolova, PhD

30 hours

Year II

Semester III

Compulsory courses (1 from 1)

GENB001 Mathematics

assoc.prof. Marin Marinov, PhD, prof. Ivan Landjev, D.Sc.

30 hours, 1/2, 3 credits

Compulsory-elective courses (1 from 2)

GENB002 Statistics

prof. Krasimir Kalinov

30 hours, 1/2, 3 credits

GENB035 The language of formal

assoc.prof. Vladimir Sotirov, PhD

30 hours, 1/2, 3 credits

Practical courses of the program - with credits (4 from 6)

CSCB008 Computer architecture

prof. Vladimir Lazarov, D.Sc.

30 hours, 3 credits

CSCB007 Operating system

assoc.prof. Nikolai Dokev, PhD

30 hours, 3 credits

CSCB317 Data structures

assoc.prof. Velina Slavova, PhD

30 hours, 3 credits

CSCB316 Labs of Data structures

Luchesar Tomov, PhD

30 hours, 3 credits

CSCB407 Study of operations

academician Petar Kenderov, D.Sc.

30 hours, 3 credits

CSCB702 e-Commerce

assoc.prof. Dimitrina Polimirova-Nikolova

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB315 Analytical Geometry

assoc.prof. Marin Marinov, PhD, assist. prof. Stoyan Boev, PhD

30 hours

CSCB010 Advanced programming

assoc.prof. Nikolay Kirov, PhD

30 hours

Semester IV

Compulsory courses (1 from 1)

GENB001 Mathematics

assoc.prof. Marin Marinov, PhD, prof. Ivan Landjev, D.Sc.

30 hours, 2/2, 3 credits

Compulsory-elective courses (1 from 2)

GENB002 Statistics

prof. Krasimir Kalinov

30 hours, 1/2, 3 credits

GENB035 The language of formal

assoc.prof. Vladimir Sotirov, PhD

30 hours, 2/2, 3 credits

Practical courses of the program - with credits (4 from 6)

CSCB012 Networks and Communications

assoc.prof. Emil Stoilov, PhD

30 hours, 3 credits

CSCB013 Computer networks

assoc.prof. Emil Stoilov, PhD

30 hours, 3 credits

CSCB011 Modeling with UML

assoc.prof. Georgi Tuparov, PhD

30 hours, 3 credits

CITB305 Programming with Java

assist. prof. Martin Ivanov, PhD,

30 hours, 3 credits

CSCB688 Internet script languages (PHP)

Delyan Keremidchiev

30 hours, 3 credits

CITB503 Legal and ethical aspects of IT

Denitca Topchiyska, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CITB405 Application Programming with Java

assist. prof. Martin Ivanov, PhD

30 hours

CSCB030 Linear algebra and geometry with a system of symbolic calculus

assoc.prof. Marin Marinov, PhD

30 hours

Year III

Semester V

Programme courses- with credits (6 from 8)

CSCB405 Database systems and database management

assoc.prof. Juliana Peneva, PhD

30 hours, 3 credits

CSCB412 Mathematics by means of computer algebra

assoc.prof. Marin Marinov, PhD

30 hours, 3 credits

CSCB547 Microsoft Visual C#.NET

assoc.prof. Daniela Gotseva, PhD

30 hours, 3 credits

CSCB579 Application programming with Microsoft Visual C# .NET

assoc.prof. Daniela Gotseva, PhD

30 hours, 3 credits

CSCB029 Algorithms and Programming

assoc.prof. Krasimir Manev, PhD

30 hours, 3 credits

CSCB508 Event programming with Java

assist. prof. Martin Ivanov, PhD

30 hours, 3 credits

CSCB415 Labs of Java

assist. prof. Martin Ivanov, PhD

30 hours, 3 credits

CSCB723 AI and logic programming

assoc.prof. Svetla Boytcheva, PhD, assoc.prof. Yuriy Velinov, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB631 Probability and statistics - computational and applied aspects

prof. д-р Krasimir Kalinov

30 hours

CSCB308 Fundamentals of mathematical analysis

assoc.prof. Marin Marinov, PhD

30 hours

Extracurricular educational forms – practices (1 from 1)

CSCB024 Practice of programming and Internet technologies

assoc.prof. Velina Slavova, PhD, Luchesar Tomov, PhD, prof. д-р Krasimir Kalinov,

assoc.prof. Krasimir Manev, PhD, assoc.prof. Nikolay Kirov, PhD, assoc.prof. Stanislav Ivanov, PhD,

assist. prof. Martin Ivanov, PhD, assist. prof. Filip Andonov, PhD, assoc.prof. д-р Димитър Атанасов,

assist. prof. Valentina Ivanova, PhD

9 credits

Extracurricular educational forms – self-dependent works(1 from 3)

CSCB545 Individual work: Computer algebra

assoc.prof. Marin Marinov, PhD

3 credits

CSCB578 Individual work: Event programming with Java

assist. prof. Martin Ivanov, PhD

3 credits

CSCB673 Individual work: Database systems

assoc.prof. Juliana Peneva, PhD

3 credits

Semester VI

Programme courses- with credits(6 from 8)

CSCB766 Programming with ASP .NET

assoc.prof. Daniela Gotseva, PhD

30 hours, 3 credits

CSCB536 Relational databases modeling and implementation

assoc.prof. Velina Slavova, PhD, assist. prof. Filip Andonov, PhD

30 hours, 3 credits

CSCB606 Graph algorithms

assoc.prof. Krasimir Manev, PhD

30 hours, 3 credits

CSCB607 Functional programming

assist. prof. Boyko Bantchev

30 hours, 3 credits

CSCB621 XML programming

Nikolay Ianev

30 hours 3 credits

CSCB651 Fundamentals of multimedia presentation

assoc.prof. Petya Asenova, PhD

30 hours, 3 credits

CSCB686 Distributed and Object-Oriented databases

assoc.prof. Juliana Peneva, PhD

30 hours, 3 credits

CSCB608 Expert systems

Svetla Boicheva, assoc.prof. Yuriy Velinov, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB641 Mathematical models with symbolic calculus system

assoc.prof. Marin Marinov, PhD

30 hours

CSCB411 Operating systems (Linux)

assoc.prof. Nikolai Dokev, PhD

30 hours

Extracurricular educational forms – practices (1 from 1)

CSCB025 Practice of programming and database implementation

assoc.prof. Velina Slavova, PhD, assist. prof. Filip Andonov, PhD

9 credits

Extracurricular educational forms – self-dependent works(1 from 3)

CSCB609 Individual work: Graph algorithms

assoc.prof. Krasimir Manev, PhD

3 credits

CSCB695 Individual work: Distributed and Object-Oriented databases

assoc.prof. Juliana Peneva, PhD

3 credits

CSCB699 Individual work: Multimedia representation

assoc.prof. Petya Asenova, PhD

3 credits

Specializations:

Specialization: Computer programming

Year IV

Semester VII

Programme courses- with credits (6 from 8)

CSCB706 Parallel programming
assoc.prof. Krasimir Manev, PhD
30 hours, 3 credits

CSCB707 Soundproofed coding
prof. Ivan Landjev, D.Sc.
30 hours, 3 credits

CSCB732 Software Engineering
assoc.prof. Juliana Peneva, PhD
30 hours, 3 credits

CSCB734 Information systems "Client - Server"
assoc.prof. Georgi Tuparov, PhD
30 hours, 3 credits

CSCB742 Cloud technologies
Pano Panov, Kircho Kirov
30 hours, 3 credits

CSCB506 Graphics programming
assoc.prof. Stanislav Ivanov, PhD
30 hours, 3 credits

CSCB762 Operating systems for mobile devices
assist. prof. Martin Ivanov, PhD
30 hours, 3 credits

CSCB763 Mobile application development
assist. prof. Martin Ivanov, PhD
30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB510 Computational algorithms
assoc.prof. Stanislav Ivanov, PhD
assist. prof. Mariana Raikova-Sokolova, PhD
30 hours

CSCB747 Design and development of multimedia applications
assist. prof. Yoana Minkova, PhD
30 hours

Extracurricular educational forms – training (1 from 1)

CSCB026 Training of programming
assoc.prof. Juliana Peneva, PhD, assist. prof. Martin Ivanov, PhD
12 credits

Semester VIII

Programme courses- with credits(4 from 6)

CSCB705 Classification and Pattern Recognition

assoc.prof. Dimo Dimov, PhD

30 hours, 3 credits

CSCB801 Principles of Programming Languages

assist. prof. Boyko Bantchev

30 hours, 3 credits

CSCB803 Decision making support systems

assist. prof. Filip Andonov, PhD

30 hours, 3 credits

CSCB822 Neural networks

assoc.prof. Moris Grinberg, PhD

30 hours, 3 credits

CSCB845 Computer security

prof. Evgeniy Nikolov, D.Sc.

30 hours, 3 credits

CSCB869 Java Web Services

assist. prof. Martin Ivanov, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB846 Cryptography

prof. Ivan Landjev, D.Sc.

30 hours

CSCB847 Software projects

assist. prof. Valentina Ivanova, PhD

30 hours

Extracurricular educational forms – training (1 from 1)

CSCB027 Training

assoc.prof. Dimitar Atanasov, PhD

18 credits

Specialization: Applied Informatics

Year IV

Semester VII

Programme courses- with credits(6 from 8)

CSCB554 Image processing systems

Hristo Pavlov

30 hours, 3 credits

CSCB655 e-Business applications

assist. prof. Maria Nikolova, PhD

30 hours, 3 credits

CSCB708 Careers in IT

prof. Neli Maneva, Nevena Nikolova

30 hours, 3 credits

CSCB732 Software engineering

assoc.prof. Juliana Peneva, PhD

30 hours, 3 credits

CSCB753 Modern library systems

prof. Kristina Varbanova-Dencheva, PhD

30 hours, 3 credits

CSCB755 Working with Corel software products

Hristo Pavlov

30 hours, 3 credits

CSCB756 Design and web publishing

Plamen Petrov

30 hours, 3 credits

CSCB752 Geographic Information Systems

assoc.prof. Milena Lazarova-Mitseva, PhD

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB510 Computational algorithms

assoc.prof. Stanislav Ivanov, PhD

assist. prof. Mariana Raikova-Sokolova, PhD

30 hours

CSCB747 Design and development of multimedia products

assist. prof. Petko Stainov

30 hours

Extracurricular educational forms – training (1 from 1)

CSCB028 Training of information technologies

assoc.prof. Juliana Peneva, PhD, assist. prof. Filip Andonov, PhD

12 credits

Semester VIII

Programme courses- with credits(4 from 6)

CSCB557 Management Information Systems

assist. prof. Maria Nikolova, PhD

30 hours, 3 credits

CSCB656 Information brokerage

prof. Kristina Varbanova-Dencheva, PhD

30 hours, 3 credits

CSCB684 UNIX and computer networks system administration

assist. prof. Rositza Goleva

30 hours, 3 credits

CSCB845 Computer security

prof. Evgeniy Nikolov, D.Sc.

30 hours, 3 credits

CSCB854 Current trends in Internet technologies

Todor Balabanov

30 hours, 3 credits

CSCB857 Current trends in Web-design

Iliia Goranov

30 hours, 3 credits

Practical courses of the program - without credits (1 from 2)

CSCB846 Cryptography

prof. Ivan Landjev, D.Sc.

30 hours

CSCB847 Software projects

assist. prof. Valentina Ivanova, PhD

30 hours

Extracurricular educational forms – training (1 from 1)

CSCB027 Training

assoc.prof. Dimitar Atanasov, PhD

18 credits