

## Business Information Systems

**Course code:** CIS 301

**Term and year:** Fall 2021

**Day and time:** Thursday 18:30 -21:15

**Instructor:** Ing. Armend Qerimi, Msc. PhD cand

**Instructor contact:** armend.qerimi@aauni.edu

**Consultation hours:** Thursday 18:00 – 18:30, or by appointment

<b>Credits US/ECTS</b>	3/6	<b>Level</b>	Intermediate
<b>Length</b>	15 weeks	<b>Pre-requisite</b>	CIS 161
<b>Contact hours</b>	42 hours	<b>Course type</b>	Bachelor Required

### 1. Course Description

This course requires a basic familiarity with personal computers from the point of view of a user. It will provide the students with knowledge how business information systems work, why they are necessary in today's business and what profits they can bring if used in a correct and effective way. The course will consist of two parts, theoretical and practical. The theoretical part will provide the background for some practical use by using different business information systems, including the hand-on databases development and design.

### 2. Student Learning Outcomes

Upon completion of this course, students should be able to:

- Analyze the impact of business processes and information systems on an organization
- Comprehend and have a clear understanding of the differences between data and information, traditional file systems and modern DBMS.
- Understand how business information systems work, why they are necessary in today's business and what profits they can bring if used in a correct and effective way.
- Understand the social and ethical issues related to the use of IS.
- Describe how databases are used in business
- Design and implement a simple database
- Understand the security threats of modern IT.
- Understand the analyses, design and development of information systems
- Analyze the roles and responsibilities associated with information systems management.

### 3. Reading Material

#### **Required Materials**

- Materials used in the classroom (Available in NEO LMS)

#### **Recommended Materials**

- Paul B. Andrew G. Simon H: Business Information Systems – Technology, Development and Management for the E-Business, Fifth Edition, Pearson Education Inc, 2015 (selected chapters available in pdf, the book is NOT available in the library)

- Keneth C. Laudon, Jane P.Laudon: Management Information Systems – Managing the digital firm, Sixteenth Edition, Pearson Education Inc, 2020 (selected chapters available in pdf, the book is NOT available in the library)

#### 4. Teaching methodology

A combination of lectures and hands-on exercises will be used. The lectures will be accompanied by slides wherever possible. Active participation in discussions is encouraged, based on articles and book chapters, which the students read in advance. Students also get frequent homework, helping them to train for the tasks, which appear in exams. Students are also obliged to work and deliver a project in a group (max. 3 students per group).

#### 5. Course Schedule

Date	Class Agenda
Week 1 September 2	<p><b>Topic:</b> Course introduction and academic expectations; Introduction to data, information and knowledge;</p> <p><b>Description:</b> We will walk through the syllabus and introduce the topics of this course along with the academic expectations for both, students and professor. We will have a presentation about the basic concepts of business information systems concepts.</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 1</p> <p><b>Assignments/deadlines:</b> Verification of the login credentials and ability to upload assignments on NEO</p>
Week 2 September 9	<p><b>Topic:</b> Introduction to Business Information systems</p> <p><b>Description:</b> We will discuss the types of the business information systems and their components. Elaborate in detail the behavior of the systems. Distinguish them by category and the organizational level at which they are used.</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 2</p> <p><b>Assignments/deadlines:</b></p>
Week 3 September 16	<p><b>Topic:</b> Communication, Decision Making and Different Types of Information System</p> <p><b>Description:</b> We will discuss different types of information systems such as E-commerce, Decision Making systems etc. Define their characteristics and purpose.</p> <p><b>Reading:</b></p> <p><b>Assignments/deadlines:</b> Hands on e-commerce, and other types applications and define the main characteristics</p>
Week 4 September 23	<p><b>Topic:</b> Introduction to key information systems on the digital age</p> <p><b>Description:</b> We will discuss the information system applications that businesses are using today to improve their operational excellence on decision-making. These applications include enterprise systems, systems for supply chain management, customer relationship management, artificial intelligence etc.</p> <p><b>Reading:</b> Reading Laudon &amp; Laudon, Chapter 9, 11.</p> <p><b>Assignments/deadlines:</b></p>
Week 5 September 30	<p><b>Topic:</b> Databases and business intelligence systems</p> <p><b>Description:</b> We will discuss the use of database application software, types of databases and its relation to business information systems. Describe the need for business intelligence systems and its relation to databases. Introduction to process of data mining and big-data.</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 4</p> <p><b>Assignments/deadlines:</b> groups setup for semester project</p>

Week 6 October 7	<p><b>Topic:</b> Database models</p> <p><b>Description:</b> We will discuss the types of database management systems. Define categories and its use. Describe E-R and relational model, their relationship, E-R scheme etc.</p> <p><b>Reading:</b></p> <p><b>Assignments/deadlines:</b> Define topics for teams</p>
Week 7 October 14	<p><b>Topic:</b> Examples and case study on the use of information systems</p> <p><b>Description:</b> We will go through different types of Business information systems, and explore their functionalities. As well hand-s on development of the databases.</p> <p><b>Reading:</b> hands on-session</p> <p><b>Assignments/deadlines:</b></p>
Week 8 October 21	<p><b>Topic:</b> Mid-term exam</p> <p><b>Description:</b> Mid Term test covering the previous lectures from previous weeks</p> <p><b>Reading:</b></p> <p><b>Assignments/deadlines:</b></p>
Week 9 mid-term break	<p><b>MID-TERM BREAK</b></p>
Week 10 November 4	<p><b>Topic:</b> Overview of systems analysis and design</p> <p><b>Description:</b> We will discuss the systems development process life cycle, in particular two of its processes, analysis and design. We will elaborate the importance of conducting the analysis phase to the overall success of the system; choose appropriate techniques and analyzing users requirements for the information system. Define the difference between analyses and design.</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 10, 11</p> <p><b>Assignments/deadlines:</b></p>
Week 11 November 11	<p><b>Topic:</b> Overview on the development and management of the systems</p> <p><b>Description:</b> We will discuss the purpose of the build phase (development of the applications), and changeover and implementations. Specify the end-to-end process of the system development including the different types of testing strategies. Describe the change management.</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 12</p> <p><b>Assignments/deadlines:</b></p>
Week 12 November 18	<p><b>Topic:</b> Information Systems Security and Control</p> <p><b>Description:</b> we will discuss the security of the information system. The importance of implementing security policies to keep IT systems secure. Maintaining security in networked environment, security threats, digital signature, digital certificates, basics of computer cryptography</p> <p><b>Reading:</b></p> <p><b>Assignments/deadlines:</b></p>
Week 13 November 25	<p><b>Topic:</b> Ethical, legal and moral constraints on information systems</p> <p><b>Description:</b> An overview of social and ethical issues related to the use of IS from the point of view of a manager</p> <p><b>Reading:</b> Reading Paul B. Andrew G. Simon H, Chapter 17</p> <p><b>Assignments/deadlines:</b> Group project deadline</p>
Week 14 December 2	<p><b>Topic:</b> Project Presentation</p> <p><b>Description:</b> The presentation of the group project by the students</p> <p><b>Reading:</b></p> <p><b>Assignments/deadlines:</b> Group project deadline</p>

Week 15 December 9 - final exam	<b>Topic:</b> Final Exam <b>Description:</b> <b>Reading:</b> <b>Assignments/deadlines:</b>
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### 6. Course Requirements and Assessment (with estimated workloads)

Assignment	Workload (hours)	Weight in Final Grade	Evaluated Course Specific Learning Outcomes	Evaluated Institutional Learning Outcomes*
Activity, Class Participation	42	10%	Understand the concepts of business information systems and its types, categories, and its usage. Define the databases and know how the technical basics.	2
Team Project	20	20%	Design and implementation of a simple database	3
Mid-term exam	39	25%	Understanding the differences between data and information, how business information systems work, why they are necessary in today's business	1
Homeworks	10	10%	Various types of the homework, mostly case studies related to the topics.	1
Final exam	39	35%	Understand the security threats of modern IT, system analyses, design and development, and IT infrastructure	1
<b>TOTAL</b>	<b>150</b>	<b>100%</b>		

\*1 = Critical Thinking; 2 = Effective Communication; 3 = Effective and Responsible Action

### 7. Detailed description of the assignments

#### Mid-term exam:

#### Assessment breakdown

Assessed area	Percentage
All topics covered prior to the midterm exam	
The exam contains questions requiring short explanatory answers targeting basic notions and facts.	60
Some questions require a student's opinion on a given problem. The opinion is not really relevant, the grading evaluates whether the students understand the issue and whether they are able to formulate a well-justified opinion	20
One question requires to draw a simple E-R scheme for a small database	20

**Homework:**

**Assessment breakdown**

Assessed area	Percentage
The students will get a series of homework (4-5 in the semester). They will concern the topics currently being discussed in the classroom	
Assessment criteria: accurateness of answers, creativity, form.	100

**Activity and Class Participation:**

**Assessment breakdown**

Assessed area	Percentage
This area covers activity and class participation	
Assessment criteria: participation in discussions, creativity, originality of ideas or opinions.	100

**Final exam:**

**Assessment breakdown**

Assessed area	Percentage
All topics covered during the semester, including the ones prior mid-term exam	
The exam contains questions requiring short explanatory answers targeting basic notions and facts.	60
Some questions require a student's reaction on a practical problem (choosing the best password etc.).	20
Some questions will be multiple choice	20

**8. General Requirements and School Policies**

**General requirements**

All coursework is governed by AAU's academic rules. Students are expected to be familiar with the academic rules in the Academic Codex and Student Handbook and to maintain the highest standards of honesty and academic integrity in their work.

**Electronic communication and submission**

The university and instructors shall only use students' university email address for communication, with additional communication via NEO LMS or Microsoft Teams. Students sending e-mail to an instructor shall clearly state the course code and the topic in the subject heading, for example, "COM101-1 Mid-term Exam. Question". All electronic submissions are through NEO LMS. No substantial pieces of writing (especially take-home exams and essays) can be submitted outside of NEO LMS.

**Attendance**

Attendance, i.e., presence in class in real-time, is expected and encouraged. However, the requirement that students miss not more than 35% of real-time classes is temporarily suspended due to the COVID-19 pandemic.

### ***Absence excuse and make-up options***

Should a student be absent from classes for relevant reasons (illness, serious family matters), s/he can submit to the Dean of Students an Absence Excuse Request Form supplemented with documents providing reasons for the absence. These must be submitted within one week of the absence. If possible, it is recommended the instructor be informed of the absence in advance. Should a student be absent during the add/drop period due to a change in registration this will be an excused absence if s/he submits an Absence Excuse Request Form along with the finalized add/drop form.

Students whose absence has been excused by the Dean of Students are entitled to make up assignments and exams provided their nature allows. Assignments missed due to unexcused absences which cannot be made up, may result in a decreased or failing grade as specified in the syllabus.

Students are responsible for contacting their instructor within one week of the date the absence was excused to arrange for make-up options.

***Late work:*** No late submissions will be accepted – please follow the deadlines.

### ***Electronic devices***

Electronic devices (e.g. phones, tablets, laptops) may be used only for class-related activities (taking notes, looking up related information, etc.). Any other use will result in the student being marked absent and/or being expelled from the class. No electronic devices may be used during tests or exams unless required by the exam format and the instructor.

***Eating*** is not allowed during classes.

### ***Cheating and disruptive behavior***

If a student engages in disruptive conduct unsuitable for a classroom environment, the instructor may require the student to withdraw from the room for the duration of the class and shall report the behavior to the Dean.

Students engaging in behavior which is suggestive of cheating will, at a minimum, be warned. In the case of continued misconduct, the exam or assignment will be failed and the student will be expelled from the exam or class.

### ***Plagiarism and Academic Tutoring Center***

Plagiarism is “the unauthorized use or close imitation of the language and thoughts of another author and the representation of them as one’s own original work.” (Random House Unabridged Dictionary, 2nd Edition, Random House, New York, 1993)

Turnitin’s White Paper ‘The Plagiarism Spectrum’ (available at <http://go.turnitin.com/paper/plagiarism-spectrum>) identifies 10 types of plagiarism ordered from most to least severe:

1. CLONE: An act of submitting another’s work, word-for-word, as one’s own.
2. CTRL-C: A written piece that contains significant portions of text from a single source without alterations.
3. FIND-REPLACE: The act of changing key words and phrases but retaining the essential content of the source in a paper.
4. REMIX: An act of paraphrasing from other sources and making the content fit together seamlessly.
5. RECYCLE: The act of borrowing generously from one’s own previous work without citation; To self-plagiarize.
6. HYBRID: The act of combining perfectly cited sources with copied passages—without citation—in one paper.
7. MASHUP: A paper that represents a mix of copied material from several different sources without proper citation.

8. 404 ERROR: A written piece that includes citations to non-existent or inaccurate information about sources
9. AGGREGATOR: The "Aggregator" includes proper citation, but the paper contains almost no original work.
10. RE-TWEET: This paper includes proper citation, but relies too closely on the text's original wording and/or structure.

At minimum, plagiarism from types 1 through 8 will result in a failing grade for the assignment and shall be reported to the Dean. The Dean may initiate a disciplinary procedure pursuant to the Academic Codex. Allegations of bought papers and intentional or consistent plagiarism always entail disciplinary hearing and may result in expulsion from AAU.

If unsure about technical aspects of writing, students are encouraged to consult with the tutors of the AAU Academic Tutoring Center. For more information and/or to book a tutor, please contact the ATC at: <http://atc.simplybook.me/sheduler/manage/event/1/>.

### **Course accessibility and inclusion**

Students with disabilities are asked to contact the Dean of Students as soon as possible to discuss reasonable accommodations. Academic accommodations are not retroactive. Students who will be absent from course activities due to religious holidays may seek reasonable accommodations by contacting the Dean of Students in writing within the first two weeks of the term. All requests must include specific dates for which the student requests accommodations.

## **9. Grading Scale**

<b>Letter Grade</b>	<b>Percentage*</b>	<b>Description</b>
A	95-100	<b>Excellent performance.</b> The student has shown originality and displayed an exceptional grasp of the material and a deep analytical understanding of the subject.
A-	90-94	
B+	87-89	<b>Good performance.</b> The student has mastered the material, understands the subject well and has shown some originality of thought and/or considerable effort.
B	83-86	
B-	80-82	
C+	77-79	<b>Fair performance.</b> The student has acquired an acceptable understanding of the material and essential subject matter of the course, but has not succeeded in translating this understanding into consistently creative or original work.
C	73-76	
C-	70-72	
D+	65-69	<b>Poor.</b> The student has shown some understanding of the material and subject matter covered during the course. The student's work, however, has not shown enough effort or understanding to allow for a passing grade in School Required Courses. It does qualify as a passing mark for the General College Courses and Electives.
D	60-64	
F	0-59	<b>Fail.</b> The student has not succeeded in mastering the subject matter covered in the course.

\* Decimals should be rounded to the nearest whole number.

Prepared by: Ing. Armend Qerimi, PhD cand.

Date: June 21, 2021

Approved by: Ing. Hana Prosdócimo Hajová, PhD, MBA, Chair of Mathematics and Computer Information Science Department

Date: 2<sup>nd</sup> July, 2021

Jan Vašenda, Ph.D., Dean, School of Business Administration, 26<sup>th</sup> August 2021.