Management and Information Technology

Name of the Educational Programme:	Management and Information Technology
Awarded Qualification (DUAL DEGREE)	International Black Sea University (Georgia) – **"Master of Science in IT Management"**
	University of Applied Sciences Zwickau (Germany) – **"Master of Science in Management and Information Technologies",** which is expanded into five profiles (these profiles are regulated by elective subjects during all 4 semesters).
Credit Value of the Programme:	120 ECTS
Language of Education:	English
Programme Admission Preconditions:	The following enrolment conditions for the joint Master's study program "Management and Computer Science" is fulfilled and monitored by the agreement between partner universities: A first university degree in the fields of Computer Science, Information Technologies, Management, Business Administration, International Relations, Language Science or related fields. The candidate must successfully pass the general Master's Exam; The candidate must successfully the B2 level English language intra-university exam; The candidate must successfully pass the interview, which examines the applicant's motivation, proficiency in the language of instruction of the program (English at least B2 level) and a good basic knowledge of fundamental topics related to business administration and computer science. NOTE: Interview will be conducted in online mode with the commission members from IBSU and WHZ, as well as 2 external subject experts from Computer Science, Management and/or Business Administration. Interview will address topics related to the program curriculum and will cover most of the questions related to computer science, information technology, management, business administration and related topics. Applicants who have an international certificate proving their knowledge of a English language at the B2 level are exempted from passing the English language exam; The applicant is exempted from passing the English language exam if he/she has completed an English language educational program; In case of equal points, the motivation letter and GPA of the master's degree candidate is considered in terms of the contest conditions;
Purpose of the Programme:	The internationally accredited double degree Master's program "Management and Information Technology" offers unique opportunities for future Master's students. The educational program was developed as a result of

	an international partnership with the University of Applied Sciences Zwickau (Germany) and 4 partner universities from Asia and the South Caucasus. Partner universities are: International Black Sea University (IBSU), Kazakh-American Free University (KAFU), Armenian State University of Economics (ASUE), Kyrgyz-German Institute of Applied Informatics (INAI.KG).
	The goal of the study program is to train a Master of Science (M.Sc.):
	1. The study program is intended to deepen and supplement existing knowledge and skills in the disciplines of management, business administration, business information systems,inforamtion technologies and computer science.
	2. The methodological competence of the students is to be strengthened in a targeted manner within the framework of the master's program in order to create the basis for responsible professional activities.
	3. The students should be enabled to analyze and evaluate complex business management and information technologies problems based on the subject-specific knowledge acquired in the master's program and to develop adequate solutions in this regard.
	4. Furthermore, the study program enhances the students' abilities to think interdisciplinary and work in global intercultural structures and become so-called "Business Allrounder". Therefore, social, language and intercultural skills will be trained and expanded.
	5. The study program offers a wide variety of elective subjects from the disciplines of management, business administration, business information systems, and computer science. Therefore, it is intended that students individually choose their elective subjects according to their preferred field of qualification and work profile. In addition, depending on the chosen elective subjects, students can also achieve the following qualifications: IT/Project-Manager, Software Engineer, Data Analyst, and Scientific Assistant.
	6. The master's program should also provide methods and knowledge that qualify the graduate for further scientific activities, especially in an international context.
Learning outcome	The program is practice-oriented, with an additional focus on research topics and projects. It is designed to cover the needs of national and international Business Management and Information Technologies with an additional focus on Business and Information Systems.
	In the first three semesters, each semester is structured in three cornerstones:
	1. Core disciplines of Business Management,
	2. Business and Information Systems,
	3. Information Technologies.

	- Through the first cornerstone, the students will improve and expand their existing knowledge in Risk Management, Management Control Systems, Financial Management, especially Green Finance and Digital Finance, Innovation-Management, Agile Project Management, Entrepreneurship and Startup Management, Operations and Supply Chain Management and Strategic Management. - The second cornerstone builds up expert knowledge in the areas of Business Information Systems, Business Analytics and Intelligence, Digital Business Modelling, and Change Management and focuses on the integrative connection between cornerstones one and three. - Furthermore, enables the third cornerstone top-notch skills and practice-oriented competencies in Infromation Technologies Computer Science, Programming Languages, Software Engineering, Application Development, Robotics and Machine Learning. The elective subjects of the first three semesters of the program offer the students three pathways of specialization: - Management - Business and Information Systems - Information Technologies Moreover is, the program designed as a Double Degree and is offered in a consortium between the University of Applied Sciences Zwickau (WHZ), Kazakh-American Free University (KAFU) – Ust Kamenogorsk, Kazakhstan, Armenian State University of Economics (ASUE) – Erevan, Armenia, International Black Sea University (IBSU) – Tbilisi, Georgia and Kyrgyz-German Institute of Applied Informatics (INAI.KG) – Bishkek, Kyrgyzstan. Therefore, students will acquire and expand their intercultural and language skills. They will learn to work in multicultural work and expand their knowledge of international project management. Furthermore, they receive interdisciplinary training, independently connecting the gained knowledge from the fields of Management and Information Technologies.
Evaluation Criteria	The goal of evaluation is to determine student's education results qualitatively in relation to academic program goals and parameters. Student may be assessed orally and/or in a written way. A student's knowledge and skills are assessed through 100 points grading system. It consists of midterm and final evaluations, sum of which makes up 100 points. Grading system allows: a) Five types of positive grades

| | 1) (A) Excellent – 91 -100 points;
2) (B) Very good – 81-90 points;
3) (C) Good – 71-80 points;
4) (D) Satisfactory – 61-70 points;
5) (E) Acceptable – 51-60 points.
b) Two types of negative grades
   1) (FX) Fail – 41-50 points, meaning that a student requires some more work before passing and is given a chance to sit an additional examination after independent work;
   2) (F) Fail – 40 points and less, meaning that the work of a student is not acceptable and he/she has to study the subject anew.
For the midterm and final evaluations minimal passing grade is set. The final evaluation minimal passing grade must not exceed 60% of final evaluation grade.
A credit can be awarded only after the attainment of learning outcomes, envisaged by the course syllabus and following requirements:
a) Obtaining minimal competence levels set for midterm and final evaluations;
b) Obtaining minimum 51 points out of 100 points of final grade.
A student is allowed to take an additional (make-up) exam in case he/she scored 41-50 points of final 100 grade or minimum 51 points, but did not obtain minimal competence level set for final evaluation.
Considering its specification, the format, minimal competence level and the assessment criteria of midterm and final evaluations can be determined in the specific course/research component syllabus. |
| **Field of Employment:** | This double degree programme prepares students for future tasks in the international and regional/local economy in a well-founded and practical manner. Graduates will be able to assume sustainable responsibility for economic development in the global and regional/local economy. In an increasingly global and digital world, the degree programme enables graduates to work in the areas of management and informatics as well as their intersections. Examples of specific occupational fields include middle and senior management, in particular the management of IT projects or change management in the transformation to digital business models, regional and international companies, (IT) project management, (IT) strategy development, start-up foundation, software engineering, and business intelligence/analytics. After successful completion of the program, the student will be awarded 2 diplomas – one from International Black Sea University (IBSU-Georgia) and another from Zwickau University of Applied Sciences (WHZ-Germany). |

Semester at WHZ

1. Semester	Module	Language	ECTS	Lecturing hours 1 = 45 minutes
	Management and Computer Science – compulsory courses	E	20	
PTI90230	**Programming Paradigms**	E	5	3
WIW64000	**Business Information Systems**	E	5	4
WIW32090	**Risk Management and Management Control**	E	5	4
WIW03750	**Training of Language, Research and Intercultural Skills**	E	5	4
	Elective Courses - winter term **Elective Digital Courses - winter term** ***choose courses for 10 ECTS**	E	10	
	Elective methodologic courses - Computer Science	E		
PTI90300	Science Communication	E	5	2
PTI90190	Computer Science Project	E	5	2
PTI90180	Car-to-Car Communication	E	5	3
PTI90220	Advanced Computer Graphics	E	5	4
	Elective methodologic courses - Business & Information Systems	E		
WIW64010	Digital Business Models	E	5	4
WIW00390	Change Management	E	5	1.5
	Elective methodologic courses - Management	E		
WIW31500	Managerial Challenges in the Globalized Economy	E	5	4
WIW65540	International Human Resource Management	E	5	2
WIW08520	Managing Intercultural Collaboration	E	5	4
	Total		30	

2. Semester	Module Name in Curriculum	Existing Course at IBSU which may needs to be adjusted	Language	ECTS	Lecturing hours 1 = 45 minutes
	Management and Computer Science – compulsory courses		E	15	
IBSU	Machine Learning	Logic for Computer Science and Artificial	E	5	4
IBSU	Analytics for Data Driven Decisions	Data Mining and Analysis	E	5	4
IBSU	Advanced Fields of Management	Operations and Supply Chain Management	E	5	8
	Elective Courses – summer term Elective Digital Courses – summer term ˙choose courses for 15 ECTS		E	15	
	Elective methodologic courses – Computer Science				
IBSU	Models of Computation		E	5	4
IBSU	Advanced Algorithms		E	5	3
IBSU	Computer Networks and Security		E	5	3
IBSU	Numerical Analysis		E	5	3
	Elective methodologic courses – Business & Information Systems				
IBSU	Artificial Intelligence Applications		E	5	3
IBSU	Human-Machine Interaction		E	5	3
IBSU	Deep Reinforcement Learning		E	5	3
	Elective methodologic courses – Management				
IBSU	Research Methods for Business		E	5	4
IBSU	Advanced Project Management		E	5	3

IBSU

3. Semester	Module Name in Curriculum	Existing Course at IBSU which may needs to be adjusted	Language	ECTS	Lecturing hours 1= 45 minutes
	Management and Computer Science – compulsory courses		E	15	
IBSU	**Design and Implementation of Software Systems**	**Distributed Application Development**	E	5	4
		Computer Algebra			
IBSU	**Digital Business Modelling**	**Digital Business Modeling**	E	5	4
IBSU	**Strategic Management**	**Strategic Management**	E	5	4
	Elective Courses – winter term **Elective Digital Courses – summer term** *choose courses for 15 ECTS		E	15	
	Elective methodologic courses – Computer Science				
IBSU	Models of Computation		E	5	4
IBSU	Advanced Algorithms		E	5	3
IBSU	Computer Networks and Security		E	5	3
IBSU	Numerical Analysis		E	5	3
	Elective methodologic courses – Business & Information Systems				
IBSU	Artificial Intelligence Applications		E	5	3
IBSU	Human-Machine Interaction		E	5	3
IBSU	Deep Reinforcement Learning		E	5	3
	Elective methodologic courses – Management				
IBSU	Research Methods for Business		E	5	4
IBSU	Advanced Project Management		E	5	3
IBSU	Leadership Strategies		E	5	3
IBSU	**International Coaching Project**		E	5	1

4. Semester	Module Name in Curriculum	Existing Course at IBSU which may needs to be adjusted	Language	ECTS	Lecturing hours 1= 45 minutes
IBSU	**Master Thesis**		E	25	
IBSU	**Titan Talks**		E	5	2
	Total				
	Total-ECTS	120			