

3. Educational Programme

Head of the project group (Director of the Bachelor's degree programme) – **Rasulova A.M.**, PhD in Economics, Associate Professor of the Department of Hotel and Restaurant Business, Associate Professor

1 – General information	
Full name of HEI and structural unit	State University of Trade and Economics Faculty of Technologies and Business Department of Hotel and Restaurant Business
Higher education degree and title of qualification in the original language	Bachelor's degree Subject Area «Hotel and Restaurant Business»
Official title of the educational programme	«Hotel and Restaurant Business»
Compliance with the standard of higher education of the Ministry of Education and Science of Ukraine	Meets the standard of higher education of the Ministry of Education and Science of Ukraine
Type of diploma and scope of educational programme	Bachelor's degree, single, 240 ECTS credits, duration of study 3 years 10 months
Availability of accreditation	The Ministry of Education and Science of Ukraine, Ukraine
Cycle / level	NQF of Ukraine - level 6, FQ-ENEA - first cycle, EQF-LLL – level 6
Prerequisites	Certificate of Complete General Secondary Education / Diploma of educational-proficiency level of a Junior Specialist, educational degree of a Junior Bachelor, educational and professional level of a Professional Junior Bachelor
Language(s) of instruction	Ukrainian
Duration of the educational programme	July 01, 2026
Internet address for the permanent placement of the educational programme description	https://knute.edu.ua
2 – Educational programme aim	
The formation of general and professional competences sufficient for the successful solution of specialized complex tasks and practical problems characterized by the complexity and uncertainty of conditions in the field of hotel and restaurant business.	
3 - Educational programme characteristics	
Subject area	Objects of study: hotel and restaurant business, as a component of the service sector, as

	<p>a sphere of professional activity that involves the formation, promotion, implementation and organization of the consumption of hotel and restaurant services, hotel and restaurant service.</p> <p>Learning goals: the formation of general and professional competences sufficient for the successful solution of specialized complex tasks and practical problems characterized by the complexity and uncertainty of conditions in the field of hotel and restaurant business.</p> <p>Theoretical content of the subject area: hotel business, restaurant business, product technologies of restaurant industry, information systems and technologies in the field of hotel and restaurant business, hotel and restaurant economics, marketing, design principles of hotel and restaurant enterprises (establishments), legal regulation and ensuring the safety of consumers of hotel and restaurant services, equipment of hotel and restaurant enterprises.</p> <p>Methods, techniques and technologies: general and special scientific methods: economic, informational, service methods (technological & production, interactive, service methods).</p> <p>Tools and equipment: technical tools and equipment for processing information, specialized applied licensed programs</p>
Orientation of the educational programme	Educational and professional, academic programme
The main focus of the educational programme	<p>Focusing on the implementation of educational trajectories with an applied bias.</p> <p>Special education and professional training solves professional tasks in the service, production, and technological activities of hotel and restaurant business entities.</p> <p>Keywords: hotel business, restaurant business, service, maintenance, tourism, management, marketing, psychology of service activity, information systems and technologies.</p>
Programme features	<p>Interdisciplinary and multidisciplinary training of specialists in management of organizations and their divisions. Involvement of foreign scientists and practical employees of the hotel and restaurant business in the educational process. Annual certified practical training and internship abroad. Interactive on-site practical classes. Acquisition of practical skills in the use of information technologies in hotel and restaurant business management. Acquisition of practical skills of modeling operational, financial and economic activities in the business training center based on the virtual enterprise of the hotel and restaurant industry.</p>
4 – Graduate employability and further learnability	
Employment suitability	<p>DK 003: 2010 "National Classifier of Ukraine. Classification of Professions".</p> <p>2482.1 Specialist in hospitality (hotels, tourist complexes, etc.)</p> <p>2482.2 Hospitality specialist in places of accommodation (hotels, tourist complexes, etc.)</p> <p>2482.2 Specialist in the hotel business</p> <p>2482.2 Restaurant specialist</p> <p>3414 Tourist service specialist</p>

	<p>3414 Leisure organization specialist 3414 Rural tourism development specialist 3414 Hotel service specialist 3414 Specialized service professional 3414 Leisure organization specialist 3414 Organizer of tourist and hotel activities 3414 Conference service specialist 3414 Travel consultants and tour operators 13 Managers of small enterprises without a management apparatus <i>Obtaining professional certificates based on the results of practical training.</i></p>
Further learning opportunities	Opportunity to study according to the program FQ-ENEA- second cycle, EQF-LLL - level 7, NQF of Ukraine – level 7
5 – Teaching and assessment	
Teaching and learning	Student-centered learning, self-learning, problem-oriented learning. Lectures, practical classes, independent work based on coursebooks, study guides and lecture notes, learning through practical training and professional internship, consultations with teachers, preparation for the certification exam and public defense of the qualifying paper.
Assessment	Written exams, practical training; essays, presentations, scientific presentations, current control, certification exam, graduate qualification work, etc. Assessment is carried out in accordance with the "Regulations on the organization of the educational process of students" and "Regulations on the assessment of learning outcomes of students and graduate students of SUTE".
6 – Programme competencies	
Integral competence	The ability to solve complex specialized tasks and practical problems of hotel and restaurant business entities, which involves the application of theories and methods of the system of sciences that form concepts of hospitality and are characterized by the complexity and uncertainty of conditions.
General competencies (GCs)	<p>GC 01. The ability to preserve and multiply moral, cultural, scientific values and achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, techniques and technologies, to follow a healthy lifestyle.</p> <p>GC 02. The ability to act socially responsibly and consciously, to realize one's rights and responsibilities as a member of society, to be aware of the values of a civil (free democratic) society, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.</p> <p>GC 03. The ability to learn and master modern knowledge.</p> <p>GC 04. Skills in the use of information and communication technologies.</p> <p>GC 05. The ability to work in a team.</p> <p>GC 06. The ability to communicate in the national language both orally and in writing.</p> <p>GC 07. Appreciation and respect for diversity and multiculturalism.</p> <p>GC 08. Skills of performing safe activities.</p> <p>GC 09. The ability to abstract thinking, analysis and synthesis.</p> <p>GC 10. The ability to apply knowledge in practical situations.</p> <p>GC 11. The ability to communicate in a foreign language.</p>

<p>Special (professional, subject) competences (SCs)</p>	<p>SC 01. Understanding the subject area and specifics of professional activity.</p> <p>SC 02. The ability to organize the service and production process taking into account the requirements and needs of consumers and ensure its effectiveness.</p> <p>SC 03. The ability to use in practice the basics of current legislation in the field of hotel and restaurant business and monitor changes.</p> <p>SC 04. The ability to form and implement effective external and internal communications at hospitality enterprises, interaction skills.</p> <p>SC 05. The ability to manage an enterprise, to make decisions in the economic activity of subjects of the hotel and restaurant business.</p> <p>SC 06. The ability to design the technological process of production of goods and services as well as the service process of the implementation of basic and additional services in enterprises (establishments) of the hotel, restaurant and recreation industry.</p> <p>SC 07. The ability to develop new services (products) using innovative production technologies and customer service.</p> <p>SC 08. The ability to develop, promote, implement and organize the consumption of hotel and restaurant services for various consumer segments.</p> <p>SC 09. The ability to select technological equipment and tools, to solve the issue of rational use of spatial and material resources.</p> <p>SC 10. The ability to work with technical, economic, technological and other documentation and to carry out settlement transactions as a subject of the hotel and restaurant business.</p> <p>SC 11. The ability to identify, determine and evaluate the signs, properties and indicators of the quality of products and services, which affect the level of meeting the requirements of consumers in the field of hospitality.</p> <p>SC 12. The ability to initiate the concept of business development, to formulate a business idea for the development of hotel and restaurant business entities.</p> <p>SC 13. The ability to plan, manage and control the activities of hotel and restaurant business entities.</p> <p>SC 14. <i>The ability to apply information technologies in the management of hotel and restaurant business entities.</i></p>
<p>7 – Programme learning outcomes (PLOs)</p>	
	<p>PLO 01. Know, understand and be able to use in practice the main provisions of legislation, national and international standards that regulate the activities of hotel and restaurant business entities.</p> <p>PLO 02. Know, understand and be able to use in practice the basic concepts of the theory of hotel and restaurant business, organization of customer service and activity of subjects of the market of hotel and restaurant services, as well as related sciences.</p> <p>PLO 03. Communicate freely on professional issues in national and foreign languages orally and in writing.</p> <p>PLO 04. Analyze the current trends in the development of the hospitality and recreation industry.</p> <p>PLO 05. Understand the principles, processes and technologies of organizing the work of hotel and restaurant business entities.</p> <p>PLO 06. Analyze, interpret and model service, production and organizational processes of the hotel and restaurant business based on existing scientific concepts.</p>

PLO 07. Organize the process of supporting consumers of hotel and restaurant services based on the use of modern information, communication and service technologies and compliance with quality standards and safety norms.

PLO 08. Apply the skills of productive communication with consumers of hotel and restaurant services.

PLO 09. Carry out the selection of technological equipment and tools, solve the issue of rational use of spatial and material resources.

PLO 10. Develop new services (products) using modern production and customer service technologies.

PLO 11. Apply modern information technologies to organize the work of hotels and restaurants.

PLO 12. Carry out effective quality control of products and services of hotel and restaurant establishments.

PLO 13. Define and form the organizational structure of units, coordinate their activities, determine their tasks and staffing, requirements for personnel qualifications.

PLO 14. Organize work in hotels and restaurants, in accordance with the requirements of labor protection and fire safety.

PLO 15. Understand economic processes, plan, manage and control the activities of hotel and restaurant business entities.

PLO 16. Perform tasks independently, solve tasks and problems, apply them in various professional situations and be responsible for the results of your activities.

PLO 17. Reasonably defend your views in solving professional tasks while organizing effective communications with consumers and subjects of the hotel and restaurant business.

PLO 18. Present your own projects and developments, argue your proposals for business development.

PLO 19. Act in accordance with the principles of social responsibility and civic consciousness.

PLO 20. Understand the requirements for activity in the specialty, due to the need of ensuring the sustainable development of Ukraine, its strengthening as a democratic, social, legal state.

PLO 21. Understand and realize your rights and responsibilities as a member of society, be aware of the values of a free democratic society, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

PLO 22. Preserve and increase the achievements and values of society based on the understanding of the place of the subject area in the general system of knowledge, use various types and forms of physical activity to lead a healthy lifestyle.

8 – Resource support for programme implementation

Staffing support	95% of the teaching staff involved in teaching professionally oriented disciplines have scientific degrees in their specialty. Foreign specialists from the professional environment of the hotel and restaurant business are invited to conduct problem lectures.
Material and technical support	Classroom of Digital technologies in the hotel and restaurant business Educational and scientific laboratory for food production technology Educational and scientific laboratory for technology of restaurant products Educational and scientific laboratory of service organization in the restaurant business

	<p>Laboratory of enology and bar education</p> <p>Sensory analysis laboratory</p> <p>HoReCa design laboratory</p> <p>Design and Engineering laboratory</p> <p>Laboratory of computer-aided engineering systems</p> <p>Laboratory of integrated business process management systems</p> <p>Tourism business management office</p> <p>Educational and scientific center of business simulation</p> <p>VR library, SMART library</p>
Informational support, teaching and learning materials	<p>Use of the virtual educational environment of SUTE, software: software products of “Servio Soft” LLC - Servio HMC and Servio POS for automating the work of restaurants and hotels; cloud IT solutions for the automation of hospitality establishments - EasyMS, PMS Cloud (for hotels), SkyService, Poster (for restaurants); analytical platforms for the hospitality industry - HotelMatrix, Poster; global reservation system Amadeus. The current MOODLE distance learning system provides independent and individual training, the “MIA Education” educational platform provides the organization of the educational process in face-to-face and distance forms with the possibility of comprehensive evaluation of the participants of the educational process. Author's developments of the teaching staff.</p> <p>The program is equipped with coursebooks, educational and methodical publications, an information base and access to closed sources of information, in particular scientometric databases.</p>
9 – Academic mobility	
National credit mobility	On the general grounds within Ukraine. Short-term education of students on a predetermined course in other institutions of higher education.
International credit mobility	Within the framework of the EU Erasmus+ programme on the basis of bilateral agreements between SUTE and higher education institutions of partner countries
Training of foreign applicants for higher education	Training of foreign citizens is possible.

2. List of educational programme components and their logical sequence

2.1. List of educational programme components

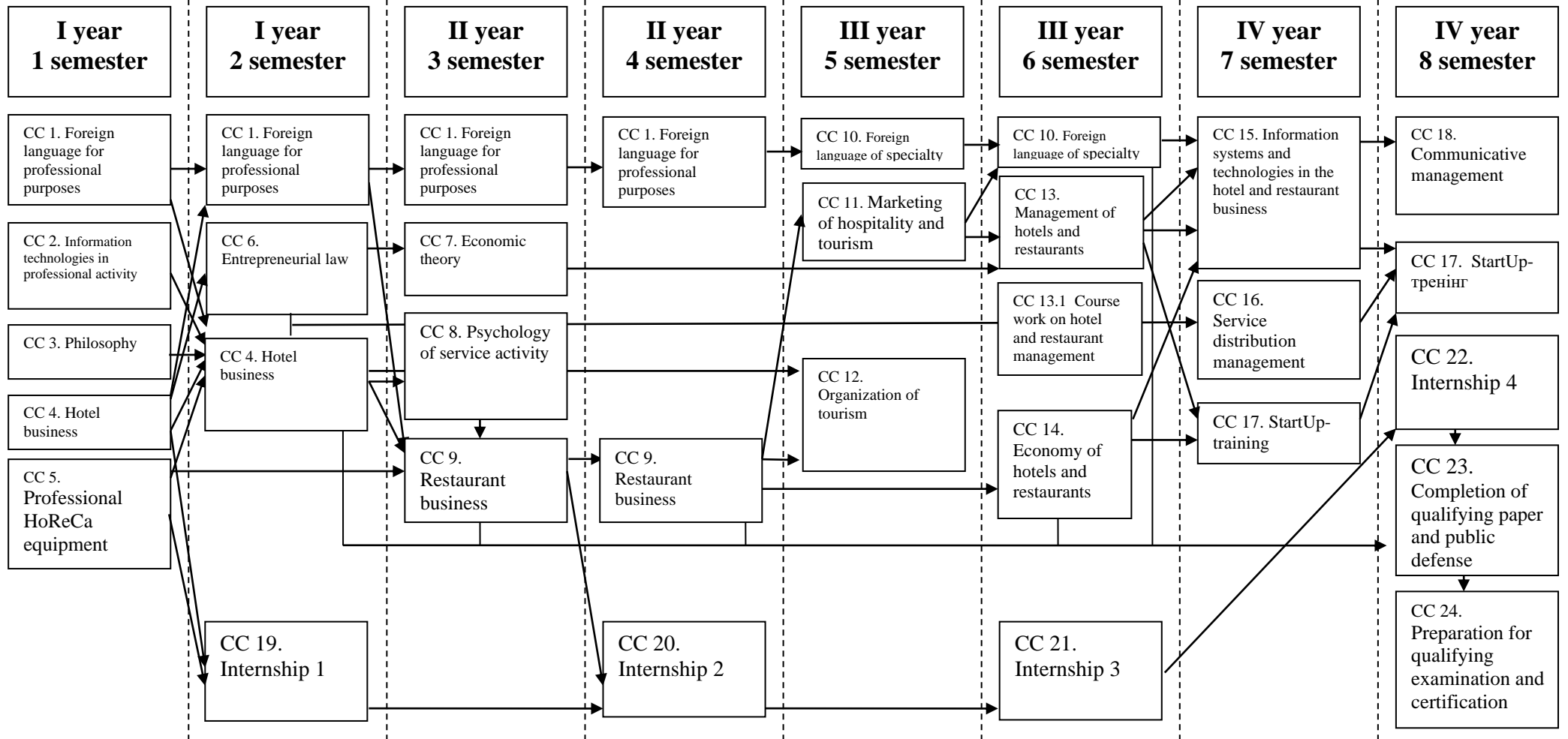
Course code	Components of the educational programme (academic disciplines, course projects (works), practical training, qualification examination, graduation thesis)	Amount of credits
1	2	3
Compulsory Components (CCs)		
CC 1.	Foreign language for professional purposes	24
CC 2.	Information technologies in professional activity	6
CC 3.	Philosophy	6
CC 4.	Hotel business	12
CC 5.	Professional HoReCa equipment	6
CC 6.	Entrepreneurial law	6
CC 7.	Economic theory	6
CC 8.	Psychology of service activity	6

Course code	Components of the educational programme (academic disciplines, course projects (works), practical training, qualification examination, graduation thesis)	Amount of credits
CC 9.	Restaurant business	12
CC 10.	Foreign language of specialty	12
CC 11.	Marketing of hospitality and tourism	6
CC 12.	Organization of tourism	6
CC 13.	Management of hotels and restaurants	6
CC 13.1	Course work on hotel and restaurant management	
CC 14.	Economy of hotels and restaurants	6
CC 15.	Information systems and technologies in the hotel and restaurant business	6
CC 16.	Service distribution management	6
CC 17.	StartUp-training	9
CC 18.	Communicative management	6
CC 19.	Internship 1	6
CC 20.	Internship 2	6
CC 21.	Internship 3	6
CC 22.	Internship 4	6
CC 23.	Completion of qualifying paper and public defense	6
CC 24.	Preparation for qualifying examination and certification	3
Total amount of compulsory components:		180
Optional Components (OCs)		
OC 1.	Business security	6
OC 2.	Life safety	6
OC 3.	Business planning	6
OC 4.	Commercial law	6
OC 5.	Digital marketing	6
OC 6.	Design	6
OC 7.	Diplomatic and business protocol and etiquette	6
OC 8.	Second foreign language	42
OC 9.	Economic analysis	6
OC 10.	Tour business	6
OC 11.	Enology	6
OC 12.	Business ethics	6
OC 13.	Ethnic cooking	6
OC 14.	Event marketing	6
OC 15.	Event management	6
OC 16.	Engineering and computer graphics	6
OC 17.	Building engineering	6
OC 18.	Internet technologies in business	6
OC 19.	Information wars	6
OC 20.	Information systems and technologies in tourism	6
OC 21.	Confectionery and baking art	6
OC 22.	Conflictology and psychology of business communication	6

Course code	Components of the educational programme (academic disciplines, course projects (works), practical training, qualification examination, graduation thesis)	Amount of credits
OC 23.	Critical thinking	6
OC 24.	Cryptocurrency market	6
OC 25.	Cultural heritage of Ukraine	6
OC 26.	Resort business	6
OC 27.	Science of Logic	6
OC 28.	International economic relations	6
OC 29.	Accounting and taxation	6
OC 30.	Public speaking	6
OC 31.	Fundamentals of cyber security	6
OC 32.	Politology	6
OC 33.	Science of Law	6
OC 34.	Consumer digital behavior prediction	6
OC 35.	Psychology	6
OC 36.	Psychology of leadership and career	6
OC 37.	Management psychology	6
OC 38.	Drawing and painting	6
OC 39.	Social responsibility of business	6
OC 40.	Social psychology	6
OC 41.	Sociology	6
OC 42.	Specialized tourism	6
OC 43.	StartUp management in tourism	6
OC 44.	Statistics	6
OC 45.	Marketing strategy and planning	6
OC 46.	Mobile application development technologies	6
OC 47.	Commodity science	6
OC 48.	Labor Law	6
OC 49.	Career management	6
OC 50.	Finance, money and credit	6
OC 51.	Target communicative English language course	6
OC 52.	Event technology in tourism	6
OC 53.	Web-design and Web-programming	6
Total amount of optional components:		60
TOTAL VOLUME OF THE EDUCATIONAL PROGRAMME		240

Exam is a form of final control for all components of the educational programme.

2.2. Structural and logical scheme of the Educational Programme (EP)



3. Form of attestation of higher education applicants

Attestation of applicants is carried out in the form of an attestation exam and a public defense of the qualification work.

The qualification work should involve the solution of a complex specialized task or practical problem in the activities of hotel and restaurant business subjects, which involves the application of theories and methods of the hotel and restaurant business and is characterized by the complexity and uncertainty of conditions.

There should be no academic plagiarism, falsification and fabrication in the qualification work.

The qualification work must be posted on the website of the institution of higher education or its structural unit, or in the repository of the higher education institution.

The attestation exam should provide for verification of the achievement of learning outcomes defined by the standard of higher education and the educational programme.

4.1. Matrix of correspondence of programme competencies to EP compulsory components

Components Competencies	CC 1.	CC 2.	CC 3.	CC 4.	CC 5.	CC 6.	CC 7.	CC 8.	CC 9.	CC 10.	CC 11.	CC 12.	CC 13.	CC 14.	CC 15.	CC 16.	CC 17.	CC 18.	CC 19.	CC 20.	CC 21.	CC 22.	CC 23.	CC 24.
	GC 01			+				+					+											+
GC 02				+		+		+	+		+		+				+		+	+	+	+	+	+
GC 03	+		+					+		+					+		+					+	+	+
GC 04		+						+		+	+		+		+		+				+	+	+	+
GC 05				+				+	+		+		+			+	+		+	+	+	+	+	+
GC 06		+	+	+	+	+			+			+	+	+	+	+	+	+	+	+	+	+	+	+
GC 07	+		+							+	+					+								+
GC 08				+	+				+			+	+	+			+		+	+	+	+	+	+
GC 09			+			+	+	+			+		+	+			+	+			+	+	+	+
GC 10	+	+		+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC 11	+									+														+
SC 01	+			+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
SC 02				+				+	+			+				+	+	+	+	+		+	+	+
SC 03				+		+			+		+		+				+		+	+	+	+	+	+
SC 04				+				+	+	+	+		+			+	+	+	+	+	+	+	+	+
SC 05							+	+					+	+		+	+	+			+	+	+	+
SC 06				+	+				+								+		+	+		+	+	+
SC 07				+					+		+					+	+	+	+	+		+	+	+
SC 08											+					+	+	+				+	+	+
SC 09				+	+				+								+		+	+		+	+	+
SC 10		+		+					+		+		+	+	+		+		+	+	+	+	+	+
SC 11				+					+		+	+	+			+	+	+	+	+	+	+	+	+
SC 12							+				+		+				+	+			+	+	+	+
SC 13				+							+		+	+	+		+	+	+		+	+	+	+
SC 14				+							+		+	+	+		+	+	+		+	+	+	+

4.2. Matrix of correspondence of programme competencies to EP optional components

Components Competencies	OC1.	OC2.	OC3.	OC4.	OC5.	OC6.	OC7.	OC8.	OC9.	OC10.	OC11.	OC12.	OC13.	OC14.	OC15.	OC16.	OC17.	OC18.	OC19.	OC20.	OC21.	OC22.	OC23.	OC24.	OC25.	OC26.	OC27.	OC28.	OC29.	OC30.	OC31.	OC32.	OC33.	OC34.	OC35.	OC36.	OC37.	OC38.	OC39.	OC40.	OC41.	OC42.	OC43.	OC44.	OC45.	OC46.	OC47.	OC48.	OC49.	OC50.	OC51.	OC52.	OC53.					
GC 01	*		*									*												*		*						*					*	*	*																			
GC 02			*	*																							*				*			*	*	*																						
GC 03																					*		*					*					*	*	*									*		*												
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GC 05													*				*	*				*	*					*	*	*		*	*	*					*	*	*				*		*											
GC 06	*	*	*	*		*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*				
GC 07							*					*	*															*																			*	*										
GC 08	*	*	*													*	*	*	*			*						*		*								*					*															
GC 09									*													*				*		*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*				
GC 10	*	*	*	*		*	*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
GC 11							*				*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
SC 01	*		*		*	*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
SC 02	*				*	*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
SC 03			*													*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
SC 04		*	*		*	*	*					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
SC 05			*										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
SC 06				*								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 07											*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 08										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 09				*							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 10	*			*					*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 11										*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 12													*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 13		*						*								*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
SC 14													*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

5.1. Matrix for providing programme learning outcomes (PLOs) with EP compulsory components

Components Programme learning outcomes	CC 1.	CC 2.	CC 3.	CC 4.	CC 5.	CC 6.	CC 7.	CC 8.	CC 9.	CC 10.	CC 11.	CC 12.	CC 13.	CC 14.	CC 15.	CC 16.	CC 17.	CC 18.	CC 19.	CC 20.	CC 21.	CC 22.	CC 23.	CC 24.
PLO 01		+		+		+			+		+	+	+				+		+	+	+	+	+	+
PLO 02				+					+	+		+						+	+	+			+	+
PLO 03	+			+						+						+	+			+	+	+	+	+
PLO 04				+					+	+	+	+	+			+	+	+	+	+	+	+	+	+
PLO 05				+	+			+	+	+			+	+	+	+	+	+	+	+	+	+	+	+
PLO 06				+					+		+				+	+	+		+	+	+	+	+	+
PLO 07				+					+						+	+	+		+	+	+	+	+	+
PLO 08				+				+	+	+	+	+	+			+	+		+	+	+	+	+	+
PLO 09				+	+				+			+					+		+	+	+	+	+	+
PLO 10				+	+				+		+	+	+			+	+		+	+	+	+	+	+
PLO 11				+							+		+	+	+		+	+		+	+	+	+	+
PLO 12				+					+				+			+	+		+	+	+	+	+	+
PLO 13								+					+			+	+	+			+	+	+	+
PLO 14				+	+				+										+	+			+	+
PLO 15				+			+		+		+		+	+	+	+	+	+	+	+	+	+	+	+
PLO 16				+			+		+		+		+			+	+	+	+	+	+	+	+	+
PLO 17				+				+	+		+	+	+			+	+	+	+	+	+	+	+	+
PLO 18				+					+		+		+			+	+		+	+	+	+	+	+
PLO 19			+	+					+		+		+			+			+	+			+	+
PLO 20		+	+			+	+					+					+				+	+	+	+
PLO 21		+	+			+																	+	+
PLO 22			+	+													+			+	+	+	+	+

5.2. Matrix for providing programme learning outcomes (PLOs) with EP optional components

Components Programme learning outcomes	OC 1.	OC 2.	OC 3.	OC 4.	OC 5.	OC 6.	OC 7.	OC 8.	OC 9.	OC 10.	OC 11.	OC 12.	OC 13.	OC 14.	OC 15.	OC 16.	OC 17.	OC 18.	OC 19.	OC 20.	OC 21.	OC 22.	OC 23.	OC 24.	OC 25.	OC 26.	OC 27.	OC 28.	OC 29.	OC 30.	OC 31.	OC 32.	OC 33.	OC 34.	OC 35.	OC 36.	OC 37.	OC 38.	OC 39.	OC 40.	OC 41.	OC 42.	OC 43.	OC 44.	OC 45.	OC 46.	OC 47.	OC 48.	OC 49.	OC 50.	OC 51.	OC 52.	OC 53.						
PLO 01				*																																																							
PLO 02											*		*								*																			*							*												
PLO 03		*		*				*			*		*						*		*					*		*			*						*		*					*															
PLO 04														*								*	*			*																																	
PLO 05			*			*			*		*		*	*		*			*		*							*								*					*	*					*												
PLO 06																	*	*	*																					*	*	*	*				*												
PLO 07														*			*	*	*			*															*		*		*	*	*	*			*			*									
PLO 08													*				*	*	*			*														*				*	*	*	*			*						*							
PLO 09	*					*										*																												*															
PLO 10											*		*	*	*					*						*															*	*	*	*															
PLO 11													*	*	*		*	*	*			*																																					
PLO 12											*		*	*						*						*															*	*	*	*			*												
PLO 13																													*									*				*	*	*	*														
PLO 14	*															*																																											
PLO 15			*					*																							*												*	*	*	*			*	*									
PLO 16						*				*		*	*										*			*	*	*													*	*	*	*			*	*			*								
PLO 17							*																*						*	*	*							*	*	*	*							*	*			*							
PLO 18																													*																									*					
PLO 19																											*		*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
PLO 20			*																							*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*			
PLO 21	*			*							*		*												*		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*		
PLO 22											*		*									*			*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

