# 1. Profile of Bachelor's degree programme «Business management» in subject area 073 «Management»

1 – General information

|                            | 1 – General miormation  |
|----------------------------|---|
| Full name of IHE           | State University of Trade and Economics,  |
| and structural unit        | Faculty of Economics, management and psychology,                                    |
|                            | Department of Management  |
| Academic degree            | Bachelor's degree   |
| and                        | Subject area «Management»   |
| qualification title in     |   |
| the original               |   |
| Educational                | «Business management»   |
| programme title            |   |
| Standards                  | Conforms to the MES standards of higher education of Ukraine                        |
| conformity                 |   |
| Qualification title        | Bachelor's degree, single, 240 ECTS credits,  |
| (degree),                  | training period 3 years 10 months   |
| programme credits          | adming period o yours to months   |
| and duration               |   |
| Accreditation              | Certificate of accreditation issued by the Ministry of education and                |
| Accicultation              | science of Ukraine (Ukraine) valid up to July 01, 2024 in accordance                |
|                            | with the order of MES of Ukraine dated 19.12.2016, No. 1565                         |
| Cycle / Level              | NQF of Ukraine – level 6,   |
| Cycle / Level              | FQ-EHEA – first cycle,  |
|                            | EQF-LLL – level 6.  |
| Academic                   |   |
|                            | - complete secondary education;   |
| backgrounds                | - the terms of admission to the programme are regulated by the SUTE Admission Rules |
| I amous co(a) of           | Ukrainian   |
| Language(s) of instruction | UKraiman  |
|                            | V-1: 1 to I-1 01 2024   |
| Programme duration         | Valid up to July 01, 2024   |
|                            | 1.44//1   |
| Educational                | https://knute.edu.ua  |
| programme link             |   |
| <b>—</b>                   | 2 – Educational programme aim   |
|                            | capable, on the basis of mastering the basic management concepts and                |
|                            | ent professional business management activities aimed to form an                    |
| _                          | system in a turbulent environment in order to make effective                        |
| management decisions.      |   |
|                            | - Educational programme general information   |
| Field of study             | - Object of study: management of organizations and their divisions.                 |
|                            | - Aims of training: training of specialists capable of solving practical            |
|                            | problems and complex specialized tasks, characterized by complexity                 |
|                            | and uncertainty of conditions, in the field of management of                        |
|                            | organizations and their divisions.  |
|                            | - Theoretical content of the field of study: paradigms, laws,                       |
|                            | regularities, principles, historical prerequisites of management                    |
|                            | development; concepts of systemic, situational, adaptive,                           |
|                            | anticipatory, anti-crisis, innovative, project management, etc.;                    |
|                            | functions, methods, technologies and managerial decisions in                        |
|                            | management.   |
|                            | - Methods, techniques and technologies: general scientific and                      |
|                            |   |

|                      | specific research methods (calculation-analytical, economic-<br>statistical, economic-mathematical, expert assessment, factual,<br>sociological, documentary, balance, etc.); methods of implementing<br>management functions (methods of marketing research; methods of |
|----------------------|--|
|                      | economic diagnostics; methods of forecasting and planning; methods   |
|                      | of designing organizational management structures; methods of  |
|                      | motivation; methods of control; methods of assessing social,   |
|                      | organizational and economic efficiency in management, etc.).   |
|                      | Management methods (administrative, economic, socio-   |
|                      | psychological, technological); technologies for justifying   |
|                      | management decisions (economic analysis, simulation modeling,  |
|                      | decision tree, etc.).  |
|                      | - Tools and equipment: modern information and communication  |
|                      | equipment, information systems and software products used in   |
|                      | management.  |
| Educational          | Educational-professional, applied, research.   |
| programme            | The programme is aimed at studying modern methods of enterprise  |
| orientation          | management and at developing skills to create and manage business  |
| Educational          | in any type of economic activity in external an unstable environment.  Formation of a set of theoretical knowledge and skills to solve   |
| programme goals      | complex problems and practical problems in the field of professional   |
| and objectives       | activity with the use of modern theories and methods of business   |
| and objectives       | management.  |
|                      | Key words: organization, management, business, management  |
|                      | decisions, business strategy, strategic enterprise management,   |
|                      | innovation, risk management.   |
| Specific             | Interdisciplinary and multidisciplinary training of specialists to   |
| requirements         | ensure the effective functioning and development of the business   |
|                      | management system, taking into account changes in the external   |
|                      | environment.   |
|                      | Emphasis on a high level of professional training, necessary for the   |
|                      | practical activity of specialists in the field of domestic business, the   |
|                      | involvement of practitioners in the educational process, using innovative business technologies.   |
|                      | 4 – Career opportunities and further learning  |
| Career opportunities | The graduate is eligible for employment and work in accordance   |
| ourcer opportunities | with the National Classifier of Ukraine "Classifier of occupations"  |
|                      | DK 003: 2010, in particular:   |
|                      | 1475.4 Supply Manager, Sales Manager.  |
|                      | 1496 Social and Corporate responsibility Manager   |
|                      | 2412.2 Labor Market Analyst  |
|                      | 2419.2 Enterprise Performance Specialist.  |
|                      | 2419.2 Public Procurement Specialist.  |
|                      | 2419.2 Commodity market research Analyst.  |
|                      | 3114 Information Communications Specialist.  |
|                      | 3411 Corporate Governance Specialist.  |
|                      | 3413 Real Estate Agent.  |
|                      | 3429 Business and Advertising services Specialist. 3436.3 Assistant Manager of a small business without management.  |
|                      | 3436.1 Assistant of the General Manager (CEO) of the enterprise  |
|                      | (institution, company).  |
|                      | 3436.1 Assistant of the Head of the department (division).   |
|                      | 2.20.2.1.20010 mile of the department (dividion).  |

|                         | D C ' '1 44 1''11 C 1 ' 1 '41 41   |
|-------------------------|--|
|                         | Professions, job titles are eligible for work in accordance with the           |
|                         | current edition of International Standard Classification of                    |
|                         | Occupations 2008 (ISCO-08):  |
|                         | 1223 Research and Development Managers   |
|                         | 1229 Production and Operations Department Managers Not<br>Elsewhere Classified |
|                         | 1227 Production and Operations Department Managers in Business                 |
|                         | Services   |
|                         | 1237 Research and Development Department Managers                              |
|                         | 1222 Production and Operations Department Managers in Manufacturing            |
|                         | 2421 Management and Organization Analysts.                                     |
|                         | 2419 Business Professionals Not Elsewhere Classified                           |
|                         | Under the conditions of gaining relevant experience it can be adapted          |
|                         | to the following areas of related professional activities: economic,           |
|                         | marketing, external economic, education, research.                             |
| <b>Further learning</b> | Have the right to continue their trainings at the second academic (master's    |
|                         | degree) level of higher education according to the second cycle                |
|                         | program FQ-EHEA, EQF-LLL - level 7, NQF of Ukraine - level 7.                  |
|                         | 5 – Training and assessment  |
| Teaching and            | Teaching course is focused on student-centered, problem-oriented               |
| learning                | learning and self-learning. The Combined approach to learning is               |
|                         | used: combination of traditional and non-traditional teaching methods          |
|                         | using thematic, problem-oriented, review lectures, including lectures-         |
|                         | conferences with the participation of practitioners, conducting and            |
|                         | application of presentations, discussions, case-study method with              |
|                         | solving real tasks, calculation-analytical and situational tasks;              |
|                         | work in small groups, extracurricular work of students, preparation of         |
|                         | course work, internship (including educational training), teachers'            |
|                         | consultations.   |
| Assessment              | Types of Assessment: current, final assessment the learning                    |
|                         | outcomes.  |
|                         | Methods of assessment: oral and written interviews (polls), tests and          |
|                         | individual tasks, analytical and situational exercises, essays, digests,       |
|                         | defense of individual and team projects, reports on internships,               |
|                         | written exams, final certification (Bachelor's thesis public defence),         |
|                         | etc. The assessment is carried out in accordance with the "Regulations on      |
|                         | assessment the learning outcomes of students and postgraduates" and            |
|                         | "Regulations on the organization of the educational process of                 |
|                         | students" in SUTE.   |
|                         | 6 – Programme competencies   |
| Integral competence     | Ability to solve the complex tasks and practical problems in the               |
| g - 11 p - 11           | process of professional activity or training in the field of study             |
|                         | management and business management and/or in the course of                     |
|                         | training, transferring the theory and methods of social and behavioral         |
|                         | sciences.  |
| General                 | GC 1. Ability to realize their rights and responsibilities as a member         |
| competencies (GC)       | of society, to understand the values of a free democratic society and          |
|                         | the need of ensuring sustainable development of Ukraine, the rule of           |
|                         | law, the rights and freedoms of the people and the community in                |
|                         | Ukraine.   |

- GC 2. Ability to preserve and increase moral, cultural, scientific values and increase the 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 the development of society, equipment and technologies, to use different types and forms of physical activity for active recreation and healthy living.
- GC 3. Ability to abstract thinking, analysis, synthesis.
- **GC 4.** Ability to apply knowledge in practice.
- **GC 5.** Knowledge and understanding of the subject area and professional activity.
- **GC 6**. Ability to communicate in the state language both orally and in writing.
- GC 7. Ability to communicate in a foreign language.
- GC 8. Skills in the use of information and communication technologies.
- **GC 9.** Ability to learn and master modern knowledge.
- **GC 10.** Ability to conduct research at the appropriate level.
- **GC 11**. Ability to adapt and act in a new situation.
- GC 12. Ability to generate new ideas (creativity).
- **GC** 13. Appreciation and respect for diversity and multiculturalism.
- GC 14. Ability to work in an international environment.
- **GC 15.** Ability to act on the basis of ethical considerations (motives).

# Professional competencies (PC)

- **PC 1**. Ability to identify and describe the characteristics of the organization.
- **PC 2**. Ability to analyze the results of the organization, to compare them with the factors of external and internal environment.
- **PC 3**. Ability to determine the prospects for the development of the organization.
- **PC 4**. Ability to identify functional areas of the organization and the relationships between them.
- **PC 5**. Ability to manage the organization and its departments through the implementation of management functions.
- **PC 6**. Ability to act socially, responsibly and consciously.
- **PC 7**. Ability to choose and use modern management tools.
- **PC 8**. Ability to plan the activities of the organization and use time management tools.
- **PC 9**. Ability to work in a team and establish interpersonal interaction in solving professional problems.
- **PC 10**. Ability to evaluate the work performed, ensure it quality and motivate the staff of the organization.
- **PC 11**. Ability to create and organize effective communications in the management process.
- **PC 12**. Ability to analyze and structure the problems of the organization, to make reasonable decisions.
- **PC 13**. Understand the principles and norms of law and use them in professional activities.
- **PC 14**. Understand the principles of psychology and use them in professional activities.
- **PC 15**. Ability to form and demonstrate leadership qualities and behavioral skills.

**PC 16**. Ability to generate business ideas and turn them into innovative business models.

**PC 17**. Ability to make operational and strategic decisions in business.

PC 18. Ability to manage risks in a changing external environment.

#### 7 - Program learning outcomes (PLO)

- **PLO 1**. Know your rights and responsibilities as a member of society, be aware of the values of civil society, the rule of law, human and civil rights and freedoms in Ukraine.
- **PLO 2.** Preserve moral, cultural, scientific values and increase the achievements of society, use different types and forms of physical activity to lead a healthy lifestyle.
- **PLO 3**. Demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership.
- **PLO 4**. Demonstrate skills to identify problems and justify management decisions.
- **PLO 5**. Describe the content of the functional areas of the organization.
- **PLO 6**. Demonstrate skills of search, collection and analysis of information, calculation of indicators to justify management decisions.
- **PLO 7**. Demonstrate organizational design skills.
- **PLO 8**. Apply management methods to ensure the effective activity of the organization.
- **PLO 9**. Demonstrate skills of interaction, leadership, teambuilding work.
- **PLO 10**. Have the skills to justify effective tools to motivate the organization's staff.
- **PLO 11**. Demonstrate skills of situation analysis and communication in different areas of activity of the organization.
- **PLO 12**. Evaluate the legal, social and economic consequences of the organization.
- **PLO 13**. Speak and write in state and foreign languages.
- **PLO 14**. Identify the causes of stress, adapt yourself and team members to a stressful situation, find ways to neutralize it.
- **PLO 15**. Demonstrate the ability to act socially responsibly and socially consciously on the basis of ethical considerations (motives), respect for diversity and interculturalism.
- **PLO 16**. Demonstrate skills of extracurricular work, flexible thinking, openness to new knowledge, be critical and self-critical.
- **PLO 17**. Perform research individually and / or in a group under the guidance of a leader.
- **PLO 18**. Demonstrate the ability to analyze and calculate economic and non-economic indicators of the enterprise.
- **PLO 19**. Demonstrate the ability to design innovation processes (target formation, planning, organizational structure, incentives, control).
- **PLO 20**. Demonstrate the ability to develop plans and strategies for creating and developing a business in a challenging environment.

#### 8 – Resource support for programme implementation

#### **Academic staff**

The Department of management of SUTE is responsible for training and graduation of specialists. The head of the department has the

|                     | degree of Doctor of Science and the academic title of Professor.          |
|---------------------|---|
|                     | 96% of lecturers who provide the process of learning bachelors in the     |
|                     | <u> </u>  |
|                     | educational programme "Business Management" have a degree and /           |
|                     | or academic title.  |
|                     | Employment contracts have been signed with all scientific and             |
|                     | pedagogical workers.  |
|                     | The participation of foreign specialists and practitioners in the         |
|                     | teaching of disciplines of the training cycle is possible.                |
| Facilities          | Availability of premises for conducting training sessions and control     |
|                     | activities – 4 m2 per person.   |
|                     | 60% of classrooms are equipped with multimedia equipment. There           |
|                     | is a specialized computer class with modern hardware and software         |
|                     | resources that provide high-quality bachelor's degree training in the     |
|                     | educational programme.  |
|                     | SUTE infrastructure: libraries, including a reading room, food            |
|                     | outlets, assembly hall, sports halls, Stadium, Medical Center,            |
|                     | dormitories.  |
| Informational,      | General scientific and special sources of information on trade            |
| teaching and        | management, educational, methodological and monographic                   |
| learning materials  | literature, information resources of the distance learning system and     |
|                     | the Internet.   |
|                     | There is access to databases of periodicals in English of a               |
|                     | corresponding or related profile (it is allowed to share the databases    |
|                     | with several educational institutions).                                   |
|                     | There is an official website of SUTE, which contains basic                |
|                     | information about its activities (structure, licenses and certificates of |
|                     | accreditation, educational / Educational-Scientific / Publishing /        |
|                     | attestation (scientific personnel) activities, educational and scientific |
|                     | structural divisions and their composition, list of academic              |
|                     | disciplines, admission rules, contact information):                       |
|                     | https://knute.edu.ua  |
|                     | The Department of distance learning support of SUTE has                   |
|                     | educational and methodological materials on the academic disciplines      |
|                     | of the curriculum: http://dist.knute.edu.ua/                              |
|                     | 9 – Academic mobility   |
| National Credit     | Short-term training of students of all educational levels (except for     |
| Mobility            | bachelors of the first year of training) in pre-defined courses with      |
|                     | credits in universities of Erasmus + member countries with                |
|                     | compulsory recognition of learning outcomes (credit transfer) for a       |
|                     | period of 3 months (minimum) to 12 months (maximum).                      |
|                     | For internship - from 2 to 12 months.                                     |
| International       | International credit mobility is implemented by concluding                |
| Credit Mobility     | agreements on international academic mobility Erasmus + option K1         |
| _                   | / credit mobility, on double graduation, on long-term international       |
|                     | projects that provide for the training of students and the issuance of    |
|                     | a double diploma, etc.  |
| Training of foreign | Conditions and features of the educational programme in the context       |
| students            | of training of foreign citizens: awareness of the Ukrainian language      |
|                     | at a level not lower than B1.   |
| <u> </u>            |   |

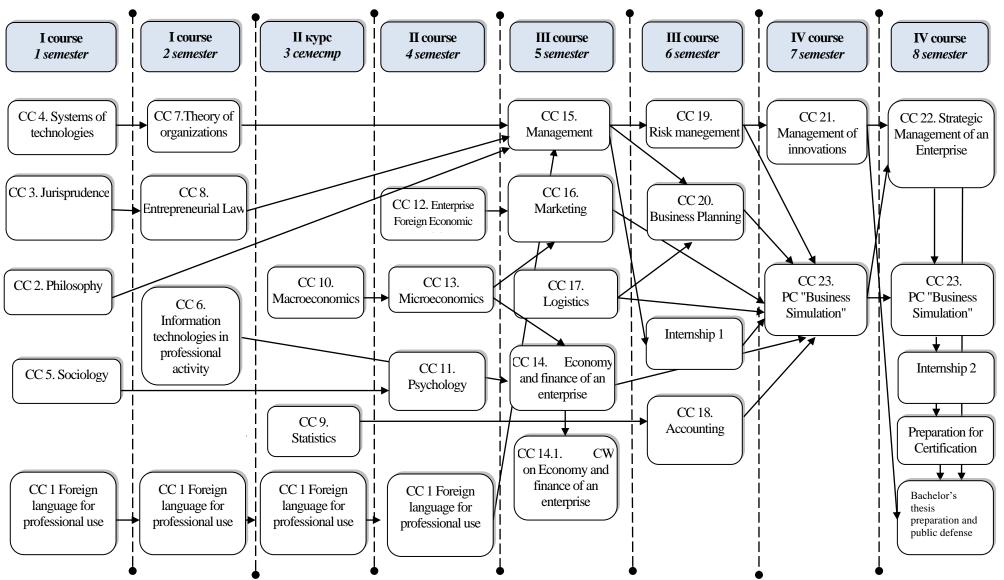
# **2.** List of the educational programme components and their logical order 2.1. List of EP components

| Course code  | Components of the educational programme (academic courses, course projects (papers), practical trainings,  | Total credits |
|--------------|--|---------------|
|              | qualification exam, final qualification work)  |               |
| 1            | ED C   | 3             |
| CC 1         | EP Compulsory components   | 24            |
| CC 1<br>CC 2 | Foreign language for professional purposes   | 24            |
| CC 2         | Philosophy Law studies   | 6             |
| CC 4         | Organization theory  | 6             |
| CC 5         | Sociology  | 6             |
| CC 6         | Information technologies in professional activity  | 6             |
| CC 7         | Technology systems   | 6             |
| CC 8         | Business law   | 6             |
| CC 9         | Statistics State S | 6             |
| CC 10        | Macroeconomics   | 6             |
| CC 11        | Psychology   | 6             |
| CC 12        | Foreign economic activity of the enterprise  | 6             |
| CC 13        | Microeconomics   | 6             |
| CC 14        | Economics and finance of the enterprise  | 6             |
| CC 14.1      | Cource paper on Economics and finance of the enterprise  |               |
| CC 15        | Management   | 6             |
| CC 16        | Marketing  | 6             |
| CC 17        | Logistics  | 6             |
| CC 18        | Accounting and taxation  | 4,5           |
| CC 19        | Risk management  | 6             |
| CC 20        | Business planning  | 4,5           |
| CC 21        | Strategic management of the enterprise   | 6             |
| CC 22        | Innovation management  | 6             |
| CC 23        | Business course 'Business-simulation'  | 9             |
| CC 24        | Practical training 1   | 3             |
| CC 25        | Practical training 2   | 6             |
| CC 26        | Pre-Certification training   | 3             |
| CC 27        | Final qualification exam revision and certification  | 6             |
|              | Total credits for compulsory components:   | 174           |
|              | EP Optional components   |               |
| OC 1         | Digital technologies in business   | 6             |
| OC 2         | HR-management  | 6             |
| OC 3         | Economic activity analysis   | 6             |
| OC 4         | Antimonopoly regulation of industrial markets  | 6             |
| OC 5         | Audit  | 6             |
| OC 6         | Banking  | 6             |
| OC 7         | Business security  | 6             |
| OC 8         | Life safety  | 6             |
| OC 9         | Business technologies  | 6             |
| OC 10        | Internal economic control  | 6             |
| OC 11        | Commercial law   | 6             |
| OC 12        | State regulation of the economy  | 6             |
| OC 13        | Public administration and local self-government  | 6             |
| OC 14        | Design   | 6             |

| 00.15          | Dialogasia and landa and a diagrams                      |     |
|----------------|--|-----|
| OC 15<br>OC 16 | Diplomatic and business protocol and etiquette           | 6   |
| OC 16          | Ecology Econometrics                                     | 6   |
| OC 17          | Economy of Ukraine                                       | 6   |
| OC 18          | Economic statistics                                      | 6   |
| OC 19          | Economic statistics  Economic analysis                   | 6   |
| OC 20          | E-commerce   | 6   |
| OC 21          |  | 6   |
| OC 23          | E- document management Business ethics                   | 6   |
| OC 24          | Internet technologies in business                        | 6   |
| OC 25          | Information wars   | 6   |
| OC 26          | Imageology   | 6   |
| OC 20          | History of Economics and Economic thought                | 6   |
| OC 28          | History of Ukraine                                       | 6   |
| OC 29          | History of Ukrainian culture                             | 6   |
| OC 29          | Controlling  | 6   |
| OC 30          | Conflictology and psychology of business communication   | 6   |
| OC 31          | Cultural heritage of Ukraine                             | 6   |
| OC 32          | Logic  | 6   |
| OC 34          | Customs affairs  | 6   |
| OC 35          | International economic relations                         | 6   |
| OC 36          | National interests in world geopolitics and geoeconomics | 6   |
| OC 30          | Operational management                                   | 6   |
| OC 37          | Public speaking  | 6   |
| OC 39          | Fundamentals of cyber security                           | 6   |
| OC 40          | Fundamentals of Entrepreneurship                         |     |
| OC 40          | Tax system   | 6   |
| OC 42          | Politology   | 6   |
| OC 43          | Business psychology                                      | 6   |
| OC 44          | Religious studies  | 6   |
| OC 45          | World culture  | 6   |
| OC 46          | World market of goods and services                       | 6   |
| OC 47          | Corporate social responsibility                          | 6   |
| OC 48          | Social leadership  | 6   |
| OC 49          | Market statistics of goods and services                  | 6   |
| OC 50          | Startup technology                                       | 6   |
| OC 51          | Labour law   | 6   |
| OC 52          | The Ukrainian language (for professional purposes)       | 6   |
| OC 53          | Public procurement management                            | 6   |
| OC 54          | Management Accounting                                    | 6   |
| OC 55          | Finance, money and credit                                | 6   |
| OC 56          | Franchising  | 6   |
| OC 57          | Communication English tailored course                    | 6   |
|                | its for optional components:                             | 66  |
|                | UMBER OF THE EP CREDITS                                  | 240 |
|                |  |     |

<sup>\*</sup> For all components of the educational programme, the form of final control is an examination.

#### 2.2. Structural and logical scheme of EP



#### 3. Final assessment of graduates

The final assessment is carried out in the form of public defense of a final qualification work.

The final qualification work should involve the solution of a complex specialized task or a practical problem in the field of management characterized by the complexity and uncertainty of conditions, with the application of theories and methods of economic science.

The final qualification work must not contain academic plagiarism, fabricated or copied information.

The final qualification work must be published on the official website of SUTE.

## **4.1** The programme competences and the EP compulsory components matrix

| (            | Components | CC 1 | CC 2 | CC3 | CC 4 | C 5 | 9 22 | CC 7 | CC 8 | 60 | 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  | 3 25 | CC 26 | 2 27 |
|--------------|------------|------|------|-----|------|-----|------|------|------|----|---------------|---------------|---------------|---------------|-------|-------|-------|---------------|--------|-------|---------------|-------|-------|-------|--------|------|-------|------|
| Com          | petences   | Ŭ    | Ŭ    | Ŭ   | Ö    | CC  | Ü    | Ď    | Ü    | CC | $\mathcal{C}$ | $\mathcal{C}$ | $\mathcal{C}$ | $\mathcal{C}$ | သ     | ည     | သ     | $\mathcal{C}$ | $\sim$ | သ     | $\mathcal{C}$ | သ     | သ     | ည     | $\sim$ | သ    | ည     | CC   |
| Com          | 1          |      |      | +   |      | +   |      |      |      |    |               |               |               |               |       |       |       |               |        |       |               |       |       |       | +      | +    | +     | +    |
|              | 2          |      | +    |     |      | +   |      |      |      |    | +             |               |               |               |       |       |       |               |        |       |               |       |       |       | +      | +    | +     | +    |
|              | 3          |      | +    |     |      |     |      |      |      |    |               |               |               | +             | +     | +     | +     |               | +      |       | +             | +     | +     | +     | +      | +    | +     | +    |
|              | 4          | +    |      |     |      |     |      |      |      |    |               | +             | +             |               | +     | +     |       |               |        |       |               | +     | +     | +     | +      | +    | +     | +    |
|              | 5          |      |      |     | +    |     |      |      |      |    | +             |               |               | +             |       | +     | +     |               |        |       |               | +     | +     |       | +      | +    | +     | +    |
|              | 6          |      | +    | +   | +    |     |      |      |      |    |               |               |               |               |       | +     |       |               |        |       |               | +     | +     |       | +      | +    | +     | +    |
| al           | 7          | +    |      |     |      |     |      |      |      |    |               |               |               |               |       |       |       |               |        |       |               | +     | +     |       |        |      |       |      |
| er           | 8          |      |      |     |      |     | +    | +    |      |    |               |               |               |               |       | +     | +     | +             | +      | +     | +             | +     | +     | +     | +      | +    | +     | +    |
| General      | 9          |      |      |     |      |     |      |      |      |    |               |               |               |               |       |       |       |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
| 9            | 10         |      |      |     |      |     | +    |      |      | +  |               |               |               |               | +     |       | +     |               |        |       | +             | +     |       | +     | +      | +    | +     | +    |
|              | 11         |      |      |     |      | +   |      |      |      |    |               | +             |               |               |       | +     |       |               |        |       | +             | +     |       |       | +      | +    | +     | +    |
|              | 12         |      |      |     |      |     |      |      |      |    |               |               |               |               | +     | +     |       |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
|              | 13         | +    |      | +   | +    |     |      |      |      |    |               | +             |               |               |       | +     |       |               |        |       |               | +     |       |       | +      | +    | +     | +    |
|              | 14         | +    |      |     |      |     |      |      |      |    |               |               | +             |               |       | +     |       |               |        |       |               | +     | +     |       | +      | +    | +     | +    |
|              | 15         |      |      |     | +    |     |      |      |      |    |               | +             |               |               |       | +     |       |               | +      |       |               | +     |       |       | +      | +    | +     | +    |
|              | 1          |      |      |     | +    |     |      |      |      |    |               |               |               |               |       | +     |       |               |        |       |               | +     |       | +     | +      | +    | +     | +    |
|              | 2          |      |      |     |      |     |      |      |      | +  |               |               | +             |               | +     |       |       |               |        | +     | +             | +     |       | +     | +      | +    | +     | +    |
|              | 3          |      |      |     |      |     |      |      |      |    |               |               |               |               | +     |       |       |               |        |       | +             | +     |       | +     | +      | +    | +     | +    |
|              | 4          |      |      |     |      |     |      |      |      |    |               |               |               |               | +     | +     |       |               |        | +     |               | +     | +     | +     | +      | +    | +     | +    |
|              | 5          |      |      |     |      |     |      |      |      |    |               |               |               |               |       | +     |       |               |        |       |               | +     | +     | +     | +      | +    | +     | +    |
|              | 6          |      |      |     | +    |     |      |      |      |    |               |               |               |               |       | +     |       |               |        |       |               | +     |       |       | +      | +    | +     | +    |
| al           | 7          |      |      |     |      |     |      |      |      |    |               |               |               |               |       | +     |       |               |        | +     | +             | +     | +     |       | +      | +    | +     | +    |
| ис           | 8          |      |      |     |      |     |      |      |      |    |               |               |               |               | +     | +     |       | +             |        |       | +             | +     | +     |       | +      | +    | +     | +    |
| sic          | 9          |      |      |     | +    | +   |      |      |      |    |               | +             |               |               |       | +     |       |               |        |       |               | +     | +     |       | +      | +    | +     | +    |
| Professional | 10         |      |      |     |      |     |      |      |      |    |               |               |               |               | +     | +     |       |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
| ro           | 11         |      |      |     | +    |     |      |      |      |    |               |               |               |               |       | +     |       |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
| P            | 12         |      |      |     |      |     |      |      |      |    |               |               |               |               | +     | +     |       |               |        | +     | +             | +     | +     | +     | +      | +    | +     | +    |
|              | 13         |      |      |     |      |     |      |      | +    |    |               |               |               |               |       |       |       |               |        |       |               |       |       |       | +      | +    | +     | +    |
|              | 14         |      |      |     |      |     |      |      |      |    |               | +             |               |               |       |       |       |               |        |       |               |       |       |       | +      | +    | +     | +    |
|              | 15         |      |      |     | +    |     |      |      |      |    |               | +             |               |               |       |       |       |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
|              | 16         |      |      |     |      |     |      | +    |      |    |               |               |               |               |       |       | +     |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
|              | 17         |      |      |     |      |     |      |      |      |    |               |               |               | +             | +     | +     | +     |               |        |       | +             | +     | +     |       | +      | +    | +     | +    |
|              | 18         |      |      |     |      |     |      |      |      |    |               |               |               |               | +     |       |       |               |        | +     |               |       |       |       | +      | +    | +     | +    |

## 4.2. The programme competences and the EP optional components matrix

| Compete      | aponents | 0C1 | OC 2     | 0C3 | 0C4 | 900 | 000 | 000 | 000 | OC 10 | 0C 11    | OC 12 | OC 13 | OC 14 | 00.15 | OC 17 | 0C 18 | 0C 19    | OC 20 | OC 21 | OC 22 | OC 23 | OC 24    | OC 25 | 0C 26    | 0C 27 | 00.29   | 06.30 | 0C 31 | OC 32 | OC 33 | OC 34 | OC 35 | OC 36 | OC 37    | 00.38 | OC 40 | OC 41 | OC 42    | OC 43 | OC 44 | OC 46 | OC47 | OC48          | OC49     | OC50            | OC51     | OC52            | OC53     | OC54     | 9530    | OC57                                    |
|--------------|----------|-----|----------|-----|-----|-----|-----|-----|-----|-------|----------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|----------|-------|----------|-------|---------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|----------|-------|-------|-------|------|---------------|----------|-----------------|----------|-----------------|----------|----------|---------|---|
| Compete      | 1        |     |          |     |     |     |     | +   | -   |       | +        |       |       |       | +     |       |       |          |       |       |       |       |          | +     | +        |       |         |       |       | +     |       |       |       | +     |          |       |       |       | +        | 1-    | + +   |       | +    |               | +        |                 | i        | П               | _        | $\top$   |         | $\Box$                                  |
|              | 2        |     |          |     |     |     |     | +   | -   |       |          | +     |       |       | +     | -     | +     |          |       |       |       |       |          |       | + -      | + +   | + +     |       |       | +     |       |       |       |       |          |       |       |       |          | -     | + +   |       |      | <u> </u>      | $\vdash$ |                 |          | П               | _        | $\dashv$ | +       | +                                       |
|              | 3        |     |          | +   |     |     |     |     |     | +     |          |       |       |       |       |       |       | +        | +     |       |       |       |          |       | +        |       |         | +     | -     |       | +     |       |       |       |          | +     | +     |       |          |       |       |       |      |               | +        | +               | ī        | П               | _        | + +      | +       | +                                       |
|              | 4        | +   | +        | -   | + + | +   | - + | -   | +   | -     |          |       |       | +     |       | +     |       | +        | +     |       |       |       | +        |       | +        |       |         |       |       |       |       | +     |       |       |          |       |       |       |          | +     |       |       |      |               | +        |                 |          | П               | +        |          | +       | П                                       |
|              | 5        |     | +        |     |     |     |     |     |     |       |          |       |       |       |       |       |       |          |       |       | +     | +     |          |       |          |       |         |       |       |       |       |       |       |       |          |       | +     |       |          | +     |       |       |      |               | +        |                 | 1        | П               |          |          |         | П                                       |
|              | 6        |     | +        |     |     |     |     |     |     |       |          |       |       | Ī     | +     |       |       |          |       | +     |       |       |          |       |          | +     | +       |       |       |       |       |       |       | +     | -        | +     |       |       |          |       |       |       |      |               |          |                 | ı        | +               |          |          |         | П                                       |
| ral          | 7        |     |          |     |     |     |     |     |     |       |          |       |       |       | +     |       |       |          |       |       |       |       |          |       |          |       |         |       |       |       |       |       |       |       | +        |       |       |       |          |       |       |       |      |               |          |                 | П        |                 |          |          |         | +                                       |
| General      | 8        | +   |          |     |     |     |     |     |     |       |          |       |       |       |       | +     |       |          |       | +     | +     |       | +        | +     | +        |       |         | +     | -     |       |       |       |       | +     |          | +     | +     |       |          |       |       |       |      |               | +        |                 |          | П               |          |          |         | +                                       |
| 3            | 9        |     | +        |     |     |     |     |     |     |       |          |       | +     |       |       |       |       |          |       | +     | +     |       |          |       |          |       |         |       |       |       |       |       |       |       |          | +     | +     |       |          |       |       |       |      |               |          |                 | 1        | П               |          |          |         | +                                       |
|              | 10       |     |          |     |     |     |     |     |     |       |          |       |       | Ī     |       | +     |       | +        | +     |       |       |       |          |       |          |       |         | +     | -     |       |       |       |       |       |          |       | +     |       |          |       |       |       |      |               | +        |                 | ı        |                 |          | +        |         | П                                       |
|              | 11       |     | +        |     |     |     |     |     |     |       |          |       | +     |       |       |       |       |          |       |       |       |       |          |       | +        |       |         |       | +     | -     |       |       |       |       |          | +     | H     |       |          | +     |       |       |      |               |          |                 |          |                 |          |          |         |   |
|              | 12       |     | +        |     |     |     |     |     |     |       |          |       |       |       |       |       |       |          |       |       |       |       |          |       | +        |       |         |       |       |       |       |       |       |       |          |       |       |       |          |       |       |       |      | +             |          | +               | ı        |                 |          |          |         |   |
|              | 13       |     |          |     |     |     |     |     |     |       |          |       | +     |       |       |       |       |          |       |       |       | +     |          | +     |          | +     |         |       | +     | -     |       |       |       |       |          |       | +     |       |          |       |       |       | +    |               |          |                 |          |                 |          |          |         | +                                       |
|              | 14       |     | +        |     |     |     |     |     |     |       |          |       |       |       | +     |       |       |          |       |       |       |       |          | +     |          |       |         |       |       |       |       |       | +     |       |          |       |       |       |          |       |       |       |      |               |          |                 | ш        | Ш               |          |          |         | +                                       |
|              | 15       |     |          |     | +   | -   |     |     |     |       |          |       | +     |       | +     |       |       |          |       |       |       | +     |          |       |          |       |         |       |       |       |       |       |       |       |          |       |       |       |          |       |       |       | +    |               |          |                 | ı        | Ш               |          |          |         |   |
|              | 1        |     |          |     |     |     |     |     |     |       |          |       | +     |       |       |       |       |          |       |       |       |       |          |       |          |       |         | +     | -     |       |       |       |       |       |          |       | +     |       |          |       |       |       |      |               |          |                 |          | Ш               |          |          |         |   |
|              | 2        |     |          | +   |     |     |     |     |     | +     |          |       |       |       | +     | +     | +     | +        | +     |       |       |       |          | +     | +        |       |         | +     | +     |       | +     |       |       |       |          | 4     |       |       |          |       |       |       | +    |               |          |                 | ш        | Ш               |          | + +      | +       | Ш                                       |
|              | 3        |     |          |     |     |     |     |     |     |       |          | +     |       |       |       |       |       |          |       |       |       |       |          |       |          |       |         |       |       |       |       |       |       |       |          |       | +     |       |          |       |       | +     |      |               |          | +               | Ш        | Ш               |          |          |         |   |
|              | 4        |     | +        |     |     |     |     |     |     |       |          |       |       |       |       |       |       |          |       |       |       |       |          |       |          |       |         | +     | +     |       |       |       |       |       |          | 4     | + +   |       |          |       |       |       |      | $oxed{oxed}$  | igspace  |                 |          | Ш               | $\perp$  | $\perp$  | $\perp$ | Ш                                       |
|              | 5        |     |          |     |     |     |     |     | +   | -     |          |       |       |       |       |       |       |          |       |       |       |       |          |       |          |       |         |       |       |       |       |       |       |       |          |       |       |       |          |       |       |       |      | Щ.            | igspace  | +               | Ш        | Ш               | _        | _        |         | Ш                                       |
|              | 6        |     |          |     |     | _   |     |     |     |       |          |       | +     |       |       |       |       |          |       |       |       |       |          |       | +        |       |         |       |       |       |       |       |       |       |          |       |       |       |          | +     |       |       | +    | ــــــ        | +        |                 | $\vdash$ | Ш               | 4        | $\perp$  | _       | Ш                                       |
| lr           | 7        | +   |          |     |     |     |     |     |     |       | +        |       |       |       |       |       |       |          |       |       |       |       |          |       |          |       |         | +     | -     |       |       |       |       |       |          |       |       |       |          |       |       |       |      |               |          | +               | ш        | Ш               |          |          |         | Ш                                       |
| Professional | 8        |     | +        |     |     |     |     |     |     |       |          |       |       |       |       |       |       |          |       |       |       |       |          |       |          |       |         | +     | -     |       |       |       |       |       |          |       | +     |       |          |       |       |       |      | L             | igspace  | +               |          | Ц               | $\perp$  | $\perp$  | Щ.      | Ш                                       |
| ssi          | 9        |     | +        |     |     | _   |     |     |     |       |          |       | +     |       |       |       |       |          |       |       |       | +     | +        | +     |          |       |         |       | +     | -     |       |       |       |       |          |       |       |       | _        | +     |       |       |      | +             | +        |                 | $\vdash$ | Ш               | 4        | $\perp$  | _       | Ш                                       |
| əfc          | 10       |     | +        |     |     |     |     |     |     |       |          |       |       |       |       |       |       | +        | +     |       |       |       |          |       |          |       | _       | +     |       |       |       |       |       |       |          | +     | +     |       |          | +     |       |       | +    | ـــــ         | <u> </u> | Ш               | $\vdash$ | $\sqcup$        | $\dashv$ | _        | _       | Ш                                       |
| Pre          | 11       |     |          |     |     | _   |     |     |     |       | <u> </u> |       |       |       |       |       |       |          |       | +     | +     |       |          | +     | +        |       |         |       | +     | -     |       |       |       |       |          |       |       |       |          |       |       |       |      | ـــــ         | +        | +               | $\vdash$ | +               | _        | _        | _       | +                                       |
|              | 12       |     |          | +   | _   | -   |     | -   | -   | -     | <u> </u> |       |       |       |       | -     | -     |          |       |       |       |       |          |       |          |       | $\perp$ | +     | -     | -     | -     |       |       |       |          | +     | + +   | -     |          |       | -     |       |      | ₩             | ₩        | igwdaps         | $\vdash$ | $\vdash$        | +        | $\dashv$ | +       | +                                       |
|              | 13       |     | _        |     |     | -   |     |     | -   | +     | +        |       | +     |       |       | -     |       |          |       |       |       |       |          | _     | _        |       | -       | -     | +     |       | -     |       |       |       |          |       | _     | +     |          | _     | -     |       |      | <del>Ļ.</del> | ₩        | $\vdash$        | +        | $\vdash$        | +        | +        | +       | +                                       |
|              | 14<br>15 |     | +        |     | -   | -   |     |     | -   |       |          |       |       | -     |       | -     |       |          |       |       |       | -     |          | +     | +        |       | -       | -     | +     |       | -     |       |       |       |          | -     |       |       |          | +     | -     |       |      | +             | _        | $\vdash$        | $\dashv$ | $\vdash$        | +        | +        | +       | ++                                      |
|              | 16       |     |          |     | -   | -   |     |     | -   |       |          |       |       | -     |       | -     |       |          |       | +     |       | +     |          |       |          |       | -       | -     | +     | -     | -     |       | +     |       |          | -     |       |       |          | +     | -     |       |      | +             | +        | $\vdash$        | $\dashv$ | $\vdash$        | +        | +        | +       | ++                                      |
|              | 17       |     | $\dashv$ | +   | -   | +   |     | -   | -   |       | 1        |       |       |       | +     | -     | -     | -        | 1     | +     |       |       | $\dashv$ | +     | $\dashv$ | +     | +       | -     | -     |       | 1     | 1     | +     | -     | $\dashv$ | +     |       | 1     | $\vdash$ | +     | -     |       | 1    | $\vdash$      | $\vdash$ | +               | $\vdash$ | $\vdash \vdash$ | +        | +        | +       | ++                                      |
|              | 18       |     |          | -   | -   | +   |     | -   | -   |       | 1        |       |       |       | +     | -     | -     | -        | 1     |       |       |       | _        | +     |          | -     | +       | +     | +     |       | 1     | 1     |       | -     | -        |       | +     | 1     | $\vdash$ | +     | -     |       | 1    | $\vdash$      | $\vdash$ | $\vdash \vdash$ | $\vdash$ | $\vdash \vdash$ | +        | +        | +       | ++                                      |
|              | 10       |     |          |     |     |     |     |     |     |       | <u> </u> |       |       |       |       |       | _l    | <u> </u> |       |       |       |       |          | L     | L_       |       |         | 7     |       |       |       | 1     |       |       |          |       | '     |       |          |       |       |       |      | Щ             | Щ.       | ш               |          | ш               |          | 工上       | Щ       | لــــــــــــــــــــــــــــــــــــــ |

#### **5.1.** The programme learning outcomes and the EP compulsory components matrix

| Components Programme learning outcomes | CC 1 | CC 2 | CC3 | CC 4 | CC 5 | 9 DD | CC 7 | 8 DD | 6 DD | 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 | CC 25 | CC 26 | CC 27 |
|--|------|------|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 01                                     |      |      | +   |      | +    |      |      | +    |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     | +     | +     |
| 02                                     |      | +    |     |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     | +     | +     | +     |
| 03                                     |      |      |     | +    |      |      |      |      |      |       |       |       |       |       | +     |       |       |       |       |       | +     | +     |       | +     | +     | +     | +     |
| 04                                     |      |      |     |      |      |      |      |      |      | +     |       | +     |       |       | +     | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     | +     |
| 05                                     |      |      |     | +    |      |      |      |      |      |       |       |       |       | +     | +     |       |       |       |       |       | +     | +     | +     | +     | +     | +     | +     |
| 06                                     |      |      | +   |      |      | +    |      |      | +    |       | +     | +     | +     | +     | +     | +     | +     |       | +     | +     | +     | +     | +     | +     | +     | +     | +     |
| 07                                     |      |      |     | +    |      |      |      |      |      |       |       |       |       |       | +     |       |       |       |       |       | +     | +     | +     | +     | +     | +     | +     |
| 08                                     |      |      |     | +    |      |      | +    |      |      |       |       |       |       | +     | +     |       |       |       |       | +     | +     | +     |       | +     | +     | +     | +     |
| 09                                     |      |      |     | +    | +    |      |      |      |      |       | +     |       |       |       | +     |       |       |       |       |       | +     | +     |       | +     | +     | +     | +     |
| 10                                     |      |      |     |      |      |      |      |      |      |       |       |       |       |       | +     |       |       |       |       |       | +     | +     |       | +     | +     | +     | +     |
| 11                                     |      |      |     |      |      |      |      |      |      |       | +     |       | +     |       | +     | +     |       |       |       | +     | +     | +     | +     | +     | +     | +     | +     |
| 12                                     |      |      |     |      |      |      |      | +    |      | +     |       | +     | +     | +     | +     |       | +     | +     | +     | +     |       |       | +     | +     | +     | +     | +     |
| 13                                     | +    |      |     |      |      |      |      |      |      |       |       |       |       |       | +     |       |       |       |       |       | +     |       | +     | +     | +     | +     | +     |
| 14                                     |      |      |     |      |      |      |      |      |      |       | +     |       |       |       | +     |       |       |       |       | +     |       |       |       | +     | +     | +     | +     |
| 15                                     |      |      |     |      |      |      |      |      |      |       |       |       |       |       | +     |       |       |       |       |       | +     | +     |       | +     | +     | +     | +     |
| 16                                     |      | +    |     |      |      |      |      |      |      |       |       |       |       |       | +     | +     |       |       | +     |       | +     | +     |       | +     | +     | +     | +     |
| 17                                     |      |      |     | +    |      | +    | +    |      |      |       |       |       |       |       | +     | +     |       |       | +     | +     | +     | +     |       | +     | +     | +     | +     |
| 18                                     |      |      |     |      |      |      |      |      | +    |       |       |       |       |       |       |       |       |       |       |       | +     | +     | +     | +     | +     | +     | +     |
| 19                                     |      |      |     |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       | +     | +     | +     | +     |
| 20                                     |      |      |     |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       | +     |       | +     | +     | +     | +     | +     | +     | +     |

## 5.2. The programme learning outcomes and the EP optional components matrix

| Components Programme learning outcomes | 0C1 | OC 2 | 003 | 005 | 900 | 0C7 | 8 OC 8 | 6 O O | OC 10 | 0C 11 | OC 12 | OC 14 | OC 15    | OC 16 | OC 17 | OC 18 | 000 | 27 20 | OC 22 | OC 23 | OC 24 | OC 25 | OC 26 | 00.27 | OC 29 | OC 30 | OC 31 | OC 32 | OC 33 | OC 35 | OC 36 | OC 37 | OC 39 | OC 40 | 0C 41 | OC 42 | OC 45 | OC 45 | OC 46 | OC47     | 0C48  | 0C49    | OC50 | 0052 | OC53 | OC54 | OC55 | 0C56<br>0C57 |
|--|-----|------|-----|-----|-----|-----|--------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|---------|------|------|------|------|------|--------------|
| 1                                      |     |      |     |     |     |     |        |       |       | +     | +     | - +   | +        |       |       | +     |     |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       | +     |       |       | +     | +     | +     | П     |          | 1.    | +       |      |      |      |      |      |              |
| 2                                      |     |      |     |     |     |     |        |       |       | -     | +     |       |          | +     |       | +     |     |       |       |       |       |       | +     | + -   | + +   |       |       | +     |       |       | +     |       |       |       |       |       | +     | +     | П     | П        |       |         |      |      |      |      |      |              |
| 3                                      |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |          | +     |         |      |      |      |      |      |              |
| 4                                      |     |      | +   | +   | -   |     | +      |       |       | +     |       |       |          |       |       |       |     |       |       |       |       | +     | +     |       |       |       |       |       | +     |       |       |       | +     | +     |       |       |       |       |       |          |       | +       |      |      |      | +    |      |              |
| 5                                      |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Ш        |       |         |      |      |      |      |      |              |
| 6                                      | +   |      | + + | - + | - + | -   | +      | +     |       |       |       |       |          |       |       |       | + + | - +   | -     |       | +     | +     | +     |       |       | +     |       |       | +     |       |       | +     | +     |       |       |       |       |       | +     | +        | _   - | + -     | +    |      |      | +    | +    | +            |
| 7                                      |     |      |     |     |     |     |        |       |       |       |       |       |          |       | +     |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Ш     | Ш        |       | 4       |      |      |      |      |      |              |
| 8                                      |     |      |     |     |     |     |        |       |       |       | + +   | -     |          |       |       |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Ш     | Ш        |       | $\perp$ |      |      |      |      |      |              |
| 9                                      |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     |       |       | +     |       |       |       |       |       |       |       |       |       |       | +     |       |       | +     |       | +     |       |       | Ш     | Ш        | + -   | +       |      |      |      |      |      |              |
| 10                                     |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | -     | ⊦     |       | Ш     | Ш        |       | $\bot$  |      |      |      |      |      |              |
| 11                                     |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     | +     | +     | +     | +     | +     | +     |       |       |       | +     |       |       |       |       | +     | +     | +-+   |       |       |       |       | Ш     | Ш        |       | $\perp$ |      |      |      |      |      | +            |
| 12                                     |     |      | +   | -   | +   | - + |        | +     |       | + -   | +     |       |          | +     |       | -     | + + | -     |       |       |       | +     |       |       |       | +     |       |       | +     | -     |       | +     | +     | +     |       |       |       |       | Ш     | +        |       |         | + +  | -    |      |      |      |              |
| 13                                     |     |      |     |     |     |     |        |       | +     |       |       |       | +        |       |       |       |     |       | +     |       |       |       |       |       |       |       | +     |       |       |       |       |       | F     | +     |       |       |       |       | Ш     | Ш        |       | $\perp$ |      | +    | +    |      |      | +            |
| 14                                     |     | -+   | +   |     |     |     |        |       |       |       |       |       |          |       |       |       |     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | +     |       | +     | F     |       | Ш     | Ш        |       | 4       |      |      |      |      |      |              |
| 15                                     |     | +    |     |     |     |     |        |       |       |       |       |       | +        | +     |       |       |     |       |       | +     |       | +     | +     |       |       |       |       | +     |       | +     | +     |       |       | +     |       |       | +     | +     | Ш     | Ш        | +     | $\perp$ |      |      |      |      |      | +            |
| 16                                     |     |      |     |     |     |     |        |       |       |       |       |       | <u> </u> |       |       |       |     |       |       |       |       |       |       |       | _     |       | +     |       |       |       |       |       | _     | +     | _     |       | ۲     |       | Ш     | Ш        | -+    | +       |      |      |      |      |      | +            |
| 17                                     |     |      |     | _   |     |     |        |       |       |       |       |       | <u> </u> |       |       |       |     |       |       |       |       |       |       |       | _     |       |       |       | _     |       |       |       | _     |       |       |       |       |       | Ш     | Ш        | +     | +       |      |      |      |      |      |              |
| 18                                     |     |      | +   | +   | +   | -   | +      |       | _     |       |       |       | +        |       | _     |       |     |       |       |       |       | _     | _     |       | _ _   | +     |       |       | _ _   |       | +     |       | _     |       | +     |       | H     |       | Ш     | $\sqcup$ | 4     | 4       |      |      |      | +    |      | +            |
| 19                                     | +   |      |     | _   |     |     |        |       |       |       |       |       | <u> </u> |       |       |       |     |       |       |       |       |       |       |       | _     |       |       |       | _     |       |       |       | _     |       |       |       |       |       | Ш     | Ш        |       | 4       |      |      |      |      |      | +            |
| 20                                     |     | +    |     |     |     |     |        |       |       |       |       |       |          |       |       |       |     | +     | -     |       | +     |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Ш     | +        |       | $\perp$ |      |      |      |      |      |              |