## 3. Educational Program "Marketing" in specialty 075 "Marketing" project team manager (program guarantor), Candidate of Economic Sciences, <br> Associate Professor of the Department of Marketing Suslova T. O. <br> 3.1. The Profile of the Educational Program "Marketing" in specialty 075 "Marketing"

|  | 1- General information |
| :---: | :--- |
| $\begin{array}{c}\text { Full name of IHE and } \\ \text { structural unit }\end{array}$ | $\begin{array}{l}\text { State University of Trade and Economics, } \\ \text { Faculty of Trade and Marketing, } \\ \text { The Department of Marketing }\end{array}$ |
| $\begin{array}{c}\text { Level of higher education } \\ \text { and qualification name in } \\ \text { the original language }\end{array}$ | Level of higher education «Bachelor» |
| $\begin{array}{c}\text { Educational program } \\ \text { official name }\end{array}$ | "Marketing" |
| $\begin{array}{c}\text { Compliance with the } \\ \text { standard of higher } \\ \text { education of Ministry } \\ \text { of Education and } \\ \text { Science of Ukraine }\end{array}$ | $\begin{array}{l}\text { It corresponds to the standard of higher } \\ \text { education of Ministry of Education and } \\ \text { Science of Ukraine }\end{array}$ |
| $\begin{array}{c}\text { Diploma type and volume } \\ \text { of the educational } \\ \text { program }\end{array}$ | Bachelor diploma, single, 240 ECTS credits, training period 3 years |
| and 10 months |  |$\}$

Formation of theoretical, professional knowledge and practical skills necessary to effectively solve marketing orientation tasks of participants of market relations in competitive markets. Mastering the technologies and methods of marketing: market research, studying the needs of consumers, the formation of the product, price, marketing and communication policy of the enterprises to meet their economic and social interests.

3 - Educational program characteristics
$\left.\left.\begin{array}{|c|l|}\hline \text { Subject area } & \begin{array}{l}\text { - Object of study: marketing activity as a form of interaction } \\ \text { between subjects of market relations to satisfy their economic and } \\ \text { social interests. } \\ \text { - Learning goals: training bachelors of marketing who possess } \\ \text { modern economic thinking and the relevant competencies necessary } \\ \text { for the implementation of effective marketing activities. } \\ \text {-The theoretical content of the subject area: the essence of } \\ \text { marketing as a modern concept of business management; conceptual } \\ \text { and categorical apparatus, principles, functions, concepts of marketing } \\ \text { and their historical prerequisites; the specifics of the activities of } \\ \text { market entities in various areas and on different types of markets; } \\ \text { content of marketing activities, development of marketing strategies } \\ \text { and formation of management decisions in the field of marketing. }\end{array} \\ \begin{array}{l}\text { - Methods, techniques and technologies: general scientific and } \\ \text { special methods, professional methods and technologies necessary to } \\ \text { ensure effective marketing activities. } \\ \text { - Tools and equipment: modern universal and specialized }\end{array} \\ \hline \text { Educational program } \\ \text { orientation } \\ \text { information systems and software products necessary for making and } \\ \text { implementing marketing management decisions. }\end{array} \right\rvert\, \begin{array}{l}\text { Educational and professional. } \\ \text { Theoretical content of the subject area: the essence of marketing as a } \\ \text { modern concept of business management; } \\ \text { conceptual and categorical apparatus, principles, functions, marketing } \\ \text { concepts and their historical preconditions; specifics of activity of } \\ \text { market participants in different spheres and in different types of } \\ \text { markets; the content of marketing activities, development of } \\ \text { marketing strategies and the formation of management decisions in } \\ \text { the field of marketing. }\end{array}\right\}$

| Employability | The graduate may hold positions according to the National <br> Classifier of professions DK 003:2010: assistant of the head of <br> enterprise (institution, organization); chain supplier; sales organizer; <br> commercial agent; trading agent; trader (business service and <br> advertising). |
| :---: | :--- |
| Further learning | The possibility of the second cycle degree program FQ-EHEA, <br> level 7 EQF-LLL and level 7 NLC. Obtaining additional <br> qualifications in the system of postgraduate education. |
| Teaching and Learning | Competency approach in the design and implementation of training <br> programs. <br> Teaching on the basis of problem-oriented learning using <br> educational technologies and techniques to develop abilities and <br> motivate students' interest. |
| Assessment | Assessment of written examinations, defence of term papers, <br> individual and collective research works should be carried out in <br> accordance with the Regulations on the organization of the <br> educational process of students and the Regulations on the <br> assessment of learning outcomes of students and post-graduate <br> students DTEU. <br> $\mathbf{6}$ - Program competences |
|  | Ability to solve complex special tasks and practical problems in the <br> field of marketing activity or in the process of learning, which |
| Integral |  |
| competence | involves the application of certain theories and methods of the <br> corresponding science and is characterized by complexity and <br> uncertainty of the conditions. |


| General competence (GC | GC1. Ability to fulfil their rights and responsibilities as a member of society, to realize the values of a civil (free democratic) society and the need for its sustainable development, supremacy of law, rights and freedoms of a man and citizen in Ukraine. <br> GC2. Ability to preserve and increase the moral, cultural, scientific values and achievements of society on the basis of understanding of the history and legitimacy of the subject area development, its place in the general system of knowledge about nature and society and in the development of society, engineering and technology, use different types and forms of physical activity for active rest and healthy lifestyle. <br> GC3. Ability to apply abstract thinking, analysis and synthesis. <br> GC4. The ability to learn and acquire modern knowledge. <br> GC5. Determination and persistence in terms of tasks and responsibilities. <br> GC6. Knowledge and understanding of the subject area and understanding of professional activities. <br> GC7. Ability to apply knowledge in practical situations. <br> GC8. Ability to conduct research at the appropriate level. <br> GC9. Skills in the use of information and marketing technologies. <br> GC10. Ability to communicate in a foreign language. <br> GC11. Ability to work in a team. <br> GC12. Ability to communicate with representatives of other professional groups of different levels (with experts from other fields of knowledge / types of economic activity). <br> GC13. Ability to work in an international context. <br> GC14. Ability to act socially responsibly and consciously. |
| :---: | :---: |
| Professional competence (PC) | PC1. Ability to reproduce the acquired knowledge of the subject area of marketing logically and consistently. <br> PC2. Ability to analyse and summarize the provisions of the subject area of modern marketing critically. <br> PC3. Ability to use theoretical marketing positions to interpret and predict phenomena and processes in the marketing environment. <br> PC4. The ability to conduct marketing activities based on an understanding of the nature and content of marketing theory and the functional relationships between its components.. <br> PC5. Ability to apply correctly methods, techniques and marketing tools. <br> PC6. Ability to conduct market researches in various areas of marketing activities. <br> PC7. Ability to determine the impact of functional areas of marketing on the results of economic activity of market participants. <br> PC8. Ability to develop marketing support for business development in conditions of uncertainty. <br> PC9. Ability to use marketing tools in innovation activity. <br> PC10. Ability to use marketing information systems in marketing decisions and develop recommendations to improve their effectiveness. <br> PC11. Ability to analyse the behaviour of market participants and determine the peculiarities of the functioning of markets. <br> PC12. Ability to substantiate, present and implement the results of |


| $\begin{array}{l}\text { marketing research. } \\ \text { PC13. Ability to plan and conduct effective marketing activity of } \\ \text { the market entity in cross-functional terms. } \\ \text { PC14. Ability to offer improvements due to the functions of } \\ \text { marketing activities. }\end{array}$ |  |
| :--- | :--- |
|  | $\begin{array}{l}\text { 7- Program learning outcomes }\end{array}$ |
|  | $\begin{array}{l}\text { PLO1. To demonstrate knowledge and understanding of the } \\ \text { theoretical foundations and principles of marketing activities. } \\ \text { PLO2. To analyse and predict market phenomena and processes } \\ \text { based on the application of fundamental principles, theoretical } \\ \text { knowledge and applied skills of conducting marketing activities. } \\ \text { PLO3. To apply the acquired theoretical knowledge to solve } \\ \text { practical problems in the field of marketing. } \\ \text { PLO4. To collect and analyse the necessary information, calculate } \\ \text { economic and marketing indicators, justify management decisions } \\ \text { based on the use of the necessary analytical and methodological } \\ \text { tools. } \\ \text { PLO5. To identify and analyse the key characteristics of marketing } \\ \text { systems at different levels, as well as the peculiarities of behaviour } \\ \text { of their subjects. } \\ \text { PLO6. To identify the functional areas of marketing activities of the } \\ \text { market entity and their relationships in the management system, } \\ \text { calculate the relevant indicators that characterize the effectiveness } \\ \text { of such activities. } \\ \text { PLO7. To use digital information and communication technologies, } \\ \text { as well as software products necessary for the proper conduct of } \\ \text { marketing activity and the practical application of marketing tools. } \\ \text { PLO8. To apply innovative approaches to marketing activities of }\end{array}$ |
| the market entity, flexibly adapt to changes in the marketing |  |$\}$

$\left.\left.\begin{array}{|c|l|}\hline & \begin{array}{l}\text { PLO16. To meet the requirements of a modern marketer, increase } \\ \text { the level of personal training. } \\ \text { PLO17. To demonstrate skills of written and oral professional } \\ \text { communication in the official and foreign languages, as well as } \\ \text { proper use of professional terminology. } \\ \text { PLO18. To demonstrate responsibility in relation to moral, cultural, } \\ \text { scientific values and achievements of society in professional } \\ \text { marketing activities. }\end{array} \\ \hline \mathbf{8 - R e s o u r c e ~ s u p p o r t ~ f o r ~ p r o g r a m ~ i m p l e m e n t a t i o n ~} \\ \hline \text { Staff support } & \begin{array}{l}\text { The Department of Marketing and Advertising of KNUTE is } \\ \text { graduate and it is responsible for the preparation of bachelors in } \\ \text { marketing. The staff support is in compliance with the Licensing } \\ \text { Conditions for conducting educational activities of educational } \\ \text { institutions. 100\% of the faculty members involved in teaching } \\ \text { professionally oriented disciplines have academic degrees in their } \\ \text { specialty and they have a high level of professional training. } \\ \text { In order to improve their professional level, all scientific and } \\ \text { teaching staff undertake an internship one time every five years. } \\ \text { Employment contracts have been concluded with all scientific and } \\ \text { teaching staff. }\end{array} \\ \hline \text { National credit mobility }\end{array} \right\rvert\, \begin{array}{l}\text { Individual agreements on academic mobility are allowed for studying } \\ \text { and conducting research in universities and scientific institutions of } \\ \text { Ukraine. } \\ \text { Credits received at other universities in Ukraine are recalculated }\end{array}\right\}$

|  | according to the certificate on academic mobility. |
| :---: | :--- |
| International credit <br> mobility | DTEU takes part in the program Erasmus+ in K1 according to the <br> contracts with: <br> 1. University of Grenoble Alps (Grenoble, France). <br> Educational Degree: Bachelor. Specialty: Economics and <br> Management. <br> 2. University of Central Lancashire (Preston, UK). <br> Educational Degree: Bachelor. Specialty: Business Communication. |
| Training of | Training of overseas students is conducted on the general terms or <br> on an individual schedule, provided if they study the Ukrainian <br> language in the volume of 6 ECTS credits, which are additionally <br> provided for by the curriculum. |

### 3.2. List of educational program components and their logical order

### 3.2.1. List of educational program components

| Code | Educational program (academic disciplines, term projects (papers), placement, qualification exam, final qualification work | Amount of credits |
| :---: | :---: | :---: |
| 1 | 2 | 3 |
| Compulsory components |  |  |
| CC 1 | Foreign Language for Specific Purposes <br> Categories and systematics of goods in retail Statistics <br> Marketing Information Systems | 24 |
| CC 2 | Economic Theory | 6 |
| CC 3 | Jurisprudence | 6 |
| CC 4 | Psychology | 6 |
| CC 5 | Sociology | 6 |
| CC 6 | Economics of trade | 6 |
| CC 7 | Information technologies in professional activity | 6 |
| CC 8 | Bases of entrepreneurship | 6 |
| CC 9 | Commodity science | 6 |
| CC 10 | Management | 6 |
| CC 11 | Accounting | 6 |
| CC 12 | Marketing | 6 |
| CC 13 | Marketing Communications | 6 |
| CC 14 | Marketing Researches | 6 |
| CC 14.1 | Course Paper in marketing research | 6 |
| CC 15 | E-commerce | 6 |
| CC 16 | Advertising | 6 |
| CC 17 | Consumer behaviour | 6 |
| CC 18 | Digital marketing | 9 |
| CC 19 | Customer data analytics | 6 |
| CC 20 | Forecast of digital behaviour of consumers | 6 |
| CC 21 | Start-up technology | 6 |
| CC 22 | Marketing strategy and planning | 6 |
| CC 22.1 | Course Paper in marketing strategy and planning |  |


| CC 23 | Practical course "Business Simulation | 9 |
| :--- | :--- | :---: |
| CC 24 | BrandingTotal amount of compulsory <br> components: | 6 |
| Optional components of EP |  |  |
| $\mathbf{1 6 8}$ |  |  |
| OC 1 | Safety of Life | 6 |
| OC 2 | Design in Advertising | 6 |
| OC 3 | Diplomatic and Business Protocol and Etiquette | 6 |


| 1 |  | 3 |
| :---: | :--- | :---: |
| OC 4 | Business Negotiations | 6 |
| OC 5 | Ecology | 6 |
| OC 6 | Protection of the Consumers Rights | 6 |
| OC 7 | Event marketing | 6 |
| OC 8 | Imageology | 6 |
| OC 9 | Information Wars | 6 |
| OC 10 | Information systems in retail | 6 |
| OC 11 | Categories and Taxonomy of Goods in Retail | 6 |
| OC 12 | Computer Graphics in Advertising | 6 |
| OC 13 | Logistics | 6 |
| OC 14 | Marketing Services | 6 |
| OC 15 | Marketing Commodity and Pricing Policy | 6 |
| OC 16 | International Marketing | 6 |
| OC 17 | Trade Organization | 6 |
| OC 18 | Introduction to Cyber Security | 6 |
| OC 19 | Marketing Software | 6 |
| OC 20 | Direct Marketing | 6 |
| OC 21 | Business Psychology | 6 |
| OC 22 | Advertising on the Internet | 6 |
| OC 23 | Religious Studies | 6 |
| OC 24 | Social leadership | 6 |
| OC 25 | Statistics | 6 |
| OC 26 | Commodity Science. Antiques | 6 |
| OC 27 | Commodity Science. Flowers | 6 |
| OC 28 | Commodity Science. Fuel and lubricants | 6 |
| OC 29 | Commodity Science. Vehicles | 6 |
| OC 30 | Commodity Science. Civilian weapons | 6 |
| OC 31 | Trade Equipment | 6 |
| OC 32 | Philosophy | $\mathbf{6}$ |
|  |  | Total credits for optional components: |
| Practical Training 1 | 6 |  |
| Practical Training 2 | 6 |  |
| Total |  | $\mathbf{6}$ |
| THE TOTAL VOLUME OF THE EDUCATIONAL PROGRAM | 6 |  |
| Preparation for qualification examination and attestation | 6 |  |
| Total |  | 6 |
|  |  | 6 |

The examination is the final form of assessment for all components of the educational program.

### 3.2.2. Structural and logical scheme of EP



### 3.3 The form of attestation of higher education applicants

Attestation is carried out in the form of a qualification examination.
The qualification exam should include the assessment of learning outcomes due to this educational and professional program.
3.4.1. Matrix of compliance of program competences to the compulsory components of the educational program


3．4．2．Matrix of compliance of program competencies to the optional components of the educational program

| Components <br> Competen－ ces | - | N | $\underset{0}{n}$ | $\stackrel{\forall}{U}$ | $\begin{aligned} & \text { n } \\ & 0 \end{aligned}$ | $\begin{aligned} & \bullet \\ & \cup \\ & 0 \end{aligned}$ | 乞̀ | $\begin{aligned} & \infty \\ & \cup \end{aligned}$ | $\begin{aligned} & 0 \\ & \bigcup \\ & 0 \end{aligned}$ | $\frac{0}{U}$ | $\begin{aligned} & \exists \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \mathrm{N} \\ & \ddots \\ & 0 \end{aligned}$ | $\underset{0}{2}$ | $\begin{aligned} & \pm \\ & U \end{aligned}$ | $\frac{n}{0}$ | $\begin{aligned} & 0 \\ & \ddots \\ & 0 \end{aligned}$ | $\begin{aligned} & \underset{0}{0} \\ & \hline \end{aligned}$ | $\underset{\sim}{\infty}$ | $\frac{\ddots}{0}$ | $\begin{aligned} & \text { Ǹ } \\ & \text { Û } \end{aligned}$ | $\begin{aligned} & \underset{\sim}{U} \\ & 0 \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \text { Ǹ } \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \text { Û} \\ & \text { Û } \end{aligned}$ | $\begin{aligned} & \text { Û } \\ & \text { Û } \end{aligned}$ | $\underset{\substack{\mathrm{O}}}{\substack{n \\ \hline}}$ | $\xrightarrow[\substack{\infty \\ \text { U} \\ \hline}]{ }$ | さ̀ | $\begin{aligned} & 0 \\ & \underset{\sim}{u} \end{aligned}$ | $\begin{aligned} & \text { ù } \\ & 0 \end{aligned}$ | N゙ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| GC 01 | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| GC 02 | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |
| GC 03 |  |  |  |  |  |  |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ |
| GC 04 |  | $\bullet$ |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  |  | $\bullet$ | $\bullet$ |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |
| GC 05 |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |
| GC 06 |  |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  | $\bullet$ |  |
| GC 07 |  |  |  | $\bullet$ |  | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |
| GC 08 |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |  |  | － |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GC 09 |  | － |  |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |
| GC 10 |  |  |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  | － |  |  |  |  |  |  |  |  |
| GC 11 |  |  | $\bullet$ | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GC 12 |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |
| GC 13 |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GC 14 |  |  |  |  | $\bullet$ |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  | $\bullet$ |  |  |  |  | － |  |  |  |  |  |  |  |  |  |  |  |
| PC 1 |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PC 2 | $\bullet$ |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  | － |  |  |  |  | － |  | － | $\bullet$ | $\bullet$ | $\bullet$ | － |  |  |
| PC 3 |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 4 |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ | － |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |
| PC 5 |  |  |  |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  |  |  |  |  |  |  |  |
| PC 6 |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 7 |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PC 8 |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PC 9 |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PC 10 |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 11 |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 12 |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 13 |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  | $\bullet$ | － | $\bullet$ | $\bullet$ |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  |  |
| PC 14 |  | － |  |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |

3.5.1. Matrix of providing program learning outcomes with relevant compulsory components of the educational program

| Components <br> Program learning outcomes | $\bar{U}$ | $\begin{aligned} & \sim \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & m \\ & u \\ & u \end{aligned}$ | $\begin{aligned} & \forall \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & n \\ & u \\ & u \end{aligned}$ | $\begin{aligned} & 0 \\ & \cup \\ & u \end{aligned}$ |  | $\begin{aligned} & \infty \\ & \cup \\ & \hline \end{aligned}$ | $\begin{aligned} & 2 \\ & u \\ & \hline \end{aligned}$ | $\begin{aligned} & 0 \\ & u \\ & u \end{aligned}$ | $\begin{aligned} & \exists \\ & \ddots \\ & U \end{aligned}$ | N $\circlearrowright$ $U$ | $\begin{aligned} & m \\ & u \\ & u \end{aligned}$ | $\begin{aligned} & \pm \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & \underset{寸}{U} \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & n \\ & u \\ & u \end{aligned}$ | $\begin{aligned} & 0 \\ & \hdashline \\ & \hline \end{aligned}$ | $\begin{aligned} & \underset{u}{u} \\ & \hline \end{aligned}$ | $\begin{aligned} & \infty \\ & u \\ & u \end{aligned}$ | $\frac{2}{u}$ | $\begin{aligned} & 0 \\ & \text { N } \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \bar{N} \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { U } \end{aligned}$ | $\begin{aligned} & \bar{i} \\ & \text { N } \\ & U \\ & U \end{aligned}$ | $\begin{aligned} & \text { N } \\ & \text { U } \\ & \text { U } \end{aligned}$ | さ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PLO 1 |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ | - | - | - |  | $\bullet$ |  |  | - |  |  | - | - |  |  |
| PLO 2 |  | - |  |  |  | $\bullet$ |  |  |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ |  |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |
| PLO 3 |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ | - |  | - | - |  | $\bullet$ |  | $\bullet$ | - | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ |
| PLO 4 |  |  |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ |  | - | $\bullet$ | $\bullet$ | $\bullet$ |  |  | $\bullet$ | - | $\bullet$ | - | - | $\bullet$ |  |
| PLO 5 |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ | $\bullet$ |  |  |
| PLO 6 |  |  |  |  |  | - |  |  |  | - |  | - |  |  | $\bullet$ |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |
| PLO 7 |  |  |  |  |  |  | - |  |  |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ | - |  |  |  | $\bullet$ |  |
| PLO 8 |  |  |  |  |  |  |  |  |  | - |  |  | $\bullet$ |  | $\bullet$ | - | $\bullet$ |  | $\bullet$ | $\bullet$ |  |  | - | - |  | $\bullet$ |
| PLO 9 |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - | $\bullet$ |  |  |  |
| PLO 10 |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |  |  |  |  |  |  | $\bullet$ | $\bullet$ |  |  |  |  | $\bullet$ |
| PLO 11 |  | $\bullet$ |  |  | $\bullet$ |  |  | $\bullet$ | $\bullet$ |  |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ |  |  |  |  | $\bullet$ |  |  |
| PLO 12 |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ |  |
| PLO 13 |  |  |  | $\bullet$ |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  |  |  | $\bullet$ |  |  |  |  | $\bullet$ |  |  | $\bullet$ | $\bullet$ | $\bullet$ |  |
| PLO 14 |  |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ | $\bullet$ |  |
| PLO 15 | $\bullet$ | - | $\bullet$ |  | $\bullet$ |  |  |  | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ |
| PLO 16 | $\bullet$ |  |  |  |  | $\bullet$ | $\bullet$ |  | $\bullet$ |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ | $\bullet$ | - | - | - | $\bullet$ | $\bullet$ |  | - | $\bullet$ | - | $\bullet$ |
| PLO 17 | $\bullet$ |  |  |  |  |  |  |  |  |  |  |  |  |  | $\bullet$ |  |  |  |  |  |  |  | $\bullet$ |  |  | $\bullet$ |
| PLO 18 |  |  | $\bullet$ |  |  |  |  |  |  |  |  | $\bullet$ |  | $\bullet$ | $\bullet$ |  | - |  | $\bullet$ |  |  |  | $\bullet$ | $\bullet$ |  |  |

3.5.2. Matrix of providing program learning outcomes with relevant optional components of the educational program


