



Appendix A-3: Graduate Questionnaire Survey Analysis



Graduate Questionnaire Survey Analysis

Dear Students,

Hello!

Thank you for participating in this survey. This questionnaire mainly aims to understand the graduates' achievement of professional training goals and their feedback on professional talent training and teaching management services. In order to provide reference for the improvement of talent training and teaching services. Please answer truthfully and carefully. The questionnaire is anonymous and will be kept strictly confidential, and the results will only be used for the analysis and research of the college. Thank you for your support and cooperation!

1. Career development status

A1. Your gender: [Multiple choice].

1. Male
2. Female

A2. When did you graduate: .

A3. Your place of employment: _____ city in _____ province.

A4. The degree of relevance between the work you are engaged in and the major you are studying: [Multiple choice].

1. Very relevant
2. Be more relevant
3. General
4. Relatively irrelevant
5. Not relevant

A5. Your current employment status: [Multiple choice].

1. Work
2. Start your own business
3. Freelancing
4. Are continuing their studies
5. Unemployed

1. Work situation (A5 answers those who choose "1. work" or "3. freelance").



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A5-1. Industry you are currently working in: (Answer except 5 in A4) [Multiple choice].

Note: Refer to the Industrial Classification and Codes of the National Economy (GB/T 4754-2017), the Industrial Classification of the National Economy.

1. Transportation, warehousing and postal services;
2. Mining;
3. Manufacturing;
4. Electricity, heat, gas and water production and supply;
5. Construction;
6. Wholesale and retail trade;
7. Agriculture, forestry, animal husbandry and fishery;
8. Accommodation and food and beverage industry;
9. Information transmission, software and information technology services;
10. Financial industry;
11. Real estate;
12. Leasing and business services;
13. Scientific research and technical services;
14. Water conservancy, environment and public facilities management;
15. Resident services, repairs and other services;
16. Education;
17. Health and Social Work;
18. Culture, Sports and Entertainment;
19. Public administration, social security and social organizations;
20. International organizations;
21. Army

A5-2. Your current employment occupation: (answer except 5 in A4) [Multiple choice].

1. Technicians related to water supply and drainage science and engineering;

2. Non-water supply and drainage science and engineering related technical personnel;

- 2.1 Civil servants;
- 2.2 Scientific researchers
- 2.3 Agriculture, forestry, animal husbandry and fishery technicians;
- 2.4 health professional and technical personnel;
- 2.5 economic and business personnel;
- 2.6 Financial business personnel;
- 2.7 Legal professionals;
- 2.8 Teaching staff;
- 2.9 Literary and artistic staff;
- 2.10 Sports staff;
- 2.11 Press, publication and cultural workers;
- 2.12 Other professional and technical personnel;
- 2.13 clerks and related personnel;
- 2.14 Business and service personnel;
- 2.15 production and transportation equipment operators;
- 2.16 Military;

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2.17 Miscellaneous Personnel

A5-3. The nature of your current employer: [Answer except 5 in A4, multiple choice].

11. Party and government organs
2. Scientific research and design units
3. Institutions of higher education
4. Elementary and secondary education units
5. Medical and health units
6. Other public institutions
7. State-owned enterprises
8. Private enterprises
9. Foreign-funded enterprises (Sino-foreign joint ventures, Sino-foreign cooperative joint ventures, and wholly foreign-owned enterprises).
10. Other Enterprises
11. Troops
12. Rural organized villages
13. Urban communities
14. Miscellaneous

A5-4, your current job position: [A4 in addition to 5 to answer, multiple choice].

1. Senior leaders/managers of the unit
2. Middle-level leaders/managers of the unit
3. Grass-roots leaders/managers of the unit
4. Ordinary employees or others

A5-5, your current job title; [Multiple choice].

1. Senior professional title
2. Intermediate title
3. Junior title
4. The unit did not conduct a title review/other

A5-6. The average annual income (before tax) of your work is roughly 10,000 yuan/year (income includes wages, bonuses, options, benefits that can be converted into cash, etc.) [Fill in the blanks].

A5-7: What do you think of the development of this major? [Multiple choice].

1. Very good
2. It's better
3. General
4. The comparison is not good
5. Very bad

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A5-8. Your main direction of practice now is: [Multiple Choice].

1. Water quality safety guarantee
2. Sewage treatment and recycling
3. Comprehensive improvement of water environment
4. Building water supply and drainage
5. Smart water and project management

A5-9. The nature of your current work is: [Multiple Choice].

1. Design
2. Construction
3. Operations
4. Management
5. R&D

A5-10. What roles have you assumed in the unit now: [Multiple choice].

1. Project Leader
2. Key technicians
3. General participants
4. Never participated

A5-11, have you joined industry associations/societies or held part-time positions in society after graduation?

1. Yes
2. No

A5-12, the social part-time jobs you have held are: (A5-11 person who chooses "1. Yes" answers) [Multiple choice].

1. Member of district and county-level associations
2. Member of prefecture-level association
3. Member of provincial association
4. Member of national and international associations
5. Miscellaneous

A5-13. Have you ever published a paper after graduation (including those accepted): [Multiple choice].

1. Authoritative or influential journals
2. Core journals
3. Proceedings in general journals or conferences
4. No published papers

A5-14. Have you ever applied for a patent after graduation? [Multiple choice].

1. Invention patents
2. Utility model patents
3. Design patents

4. No patent has been applied

A5-15. Your current English level is: [Multiple Choice].

1. CET-6
2. CET-4
3. There is no grading
4. Miscellaneous

A5-16, Do you have the qualification of engineer? [Multiple choice].

1. Professor-level senior engineer
2. Senior Engineer
3. Intermediate Engineer
4. Engineer qualification is not obtained

A5-17, the name of your industry qualification certificate is _____ (A5-16 select "1."). 2.3" [fill in the blank].

A5-18, among the abilities related to the following engineers, you think that you are the strongest at the moment is _____, and you think that you are the weakest at the moment is _____. [Multiple choice questions].

1. Mathematics and Natural Sciences
2. Engineering foundation and professional knowledge
3. Humanities and Social Sciences
4. Design/development
5. Engineering economy
6. Engineering tools
7. Experiments/Studies
8. Identification, analysis and resolution of problems
9. Professional Qualities/Abilities
10. Social Impact
11. Public Safety
12. Engineering Law
13. Engineering risk and reliability
14. Sustainability and environmental impact
15. Engineering Ethics
16. Professionalism
17. Team organization and management
18. Teamwork/Collaboration
19. Communication and exchange
20. International perspective
21. Project Management & Organization
22. Keep learning



2. Unemployed situation [A5 selects "5. Unemployed" people to answer this part].

A5-19: Have you been unemployed since graduation? [Multiple choice].

1. I haven't been looking for a job, and I haven't been employed
2. Have looked for a job, but have never been employed
3. Have been employed

A5-20: What are the reasons why you have not been employed? (A5-19 Answer this question with "1").

1. Personal interest reasons
2. There are other arrangements other than work
3. Not having a suitable work unit
4. Miscellaneous

A5-21、What are the difficulties you encounter in finding a job? (A5-19 answer this question with "2").

1. The development of the industry is sluggish
2. Lack of skills
3. Bad luck
4. The school is not well-known enough
5. Miscellaneous

A5-22: What are the reasons for your resignation? (A5-19 answer this question with "3").

1. Industry/position mismatch
2. Lack of skills
3. The working state/environment is not adaptable
4. Have other arrangements besides work
5. Miscellaneous

A5-23: Which of the following situations do you belong to? [Multiple choice].

1. I don't want to work for the time being
2. Prepare for entrance exams
3. Prepare to study or work abroad
4. Prepare to participate in the public recruitment examination for civil servants and public institutions
5. Prepare for conscription
6. The entrepreneurial project and direction have been determined, and various preliminary preparations and preparations for entrepreneurship are underway
7. Have determined the employment intention and are ready to sign an agreement or contract in the near future
8. In the process of selecting an employment unit

9. Miscellaneous

3、 Graduates who are continuing their studies [A5 people who choose "4 are continuing their studies" are back

Answer] A5-24, you feel about the current admission results: [Multiple choice].

1. Very satisfied
2. Relatively satisfied
3. Basically satisfied
4. Relatively unsatisfied
5. Dissatisfied

A5-25. The main reason why you choose to continue your studies is: [Multiple Choice].

1. Be interested in the major and study it in depth
2. Enhance comprehensive capabilities
3. Increase the capital of job selection and stand at a higher job search point
4. Delay the difficulty of facing employment
5. Miscellaneous

A5-26, your current stage of study is:

1. Master's degree
2. Ph.D. degree
3. Postdoctoral research

A5-27. Have you ever worked before going on to higher education?

1. Have had a job
2. Have never worked

A5-28. The relationship between your current major and your undergraduate major is: [Multiple Choice].

1. Consistent
2. Relevant
3. Not relevant

A5-29, the main reason for you to change your major is: [Multiple Choice] (A5-28 person who chooses "3" answers this question).

1. Out of personal interest
2. Good job prospects
3. The difficulty of the test is low
4. Low study pressure
5. Voluntary external transfer
6. Miscellaneous

A5-30: What is your path to further your studies?

1. Further studies in China
2. Study abroad

2. Self-evaluation of professional ability achievement (subjective evaluation of ability)

Training Objectives of Water Supply and Drainage Science and Engineering (2019 Edition)

This major aims to cultivate the ability to adapt to the needs of new urbanization construction and regional economic and social development, meet the social needs of engineering construction and management talents, develop morally, intellectually, physically, aesthetically and laborably, master the basic theories, basic knowledge and skills required for this professional and technical work, and have the ability to engage in engineering design, implementation, management, utilization and analysis related to the water supply and drainage industry, obtain basic training for engineers, have good professionalism, innovation and entrepreneurship ability and lifelong learning awareness, and be able to work in the design department, environmental protection department, High-quality application-oriented talents engaged in the design, construction, operation and management of water supply and drainage projects in industrial and mining enterprises, economic management departments and government departments. Five years after graduation, have the ability to work as an intermediate engineer or professional technical leader.

1. Ability achievement evaluation

B1. Master the basic theories, basic knowledge and skills required to engage in the professional and technical work: [Multiple Choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B2. Engaged in engineering design, implementation, management, utilization and analysis ability related to the water supply and drainage industry: [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B3. Good professionalism, innovation and entrepreneurship ability and lifelong learning awareness: [Multiple choice question].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B4. High-quality application-oriented talents engaged in the design, construction, operation and management of water supply and drainage projects: [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B5. Have the ability to serve as an intermediate engineer or professional technical leader: [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

Second, the evaluation of the achievement of training goals

Goal 1: Professionalism

It is divided into two competency points: "humanities and social science literacy" and "professional ethics".

B6. Can you consider philosophy, sociology and other factors in your professional work: [Multiple choice].

1. Totally considerable
2. Basically, it can be considered
3. Partial consideration
4. Not considered

B7. You can use other technical knowledge in your work, such as economics, management and other related knowledge. [Multiple choice].

1. Very much in line with

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2. Compliant
3. Basically compliant
4. Non-conformity

B8. In your work, you take the public interest as the highest goal. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B9. You will pay attention to the existing laws and regulations related to your business. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B10. You will be able to adhere to the principles of public safety, health and well-being in your work, take responsibility for engineering decisions, and expose factors that may harm the public or the environment. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

Objective 2: Engineering Capacity

Proficient in the natural science knowledge, professional knowledge and skills required in the field of water supply and drainage science and engineering, able to apply professional engineering principles and technologies to design feasible and reasonable solutions to complex engineering problems

B11. You can be proficient in mathematics, natural science, engineering foundation and professional basic knowledge, and be able to comprehensively mobilize the knowledge you have learned to understand, analyze and deal with problems in work practice. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B12. You can analyze and solve problems through water supply and drainage science and engineering expertise, and identify the essence of problems through phenomena. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant

4. Non-conformity

B13. When you encounter problems in the process of work or projects, you can usually apply professional knowledge, work experience and various advanced technical concepts to analyze the problems and propose solutions. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B14. You can flexibly apply your professional knowledge of water supply and drainage science and engineering to solve complex engineering problems in the field of water supply and drainage engineering at work. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

Goal 3: Industry Competition

B15. Be competent for work tasks and get good feedback from the outside world. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B16. You can adapt to the market demand and technological development of the industry, and have a competitive advantage in the industry market. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

Goal 4: Collaborative communication

B17. You can organize team members and coordinate external resources to achieve the operation management and goal realization of the project. 【Multiple Choice】

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B18. You can always agree with the team's goals in the team, support the team's decision-making, share information, and adjust your position for the benefit of the team. 【Multiple Choice】

1. Very much in line with

2. Compliant
3. Basically compliant
4. Non-conformity

B19. You are able to integrate, lead and lead the team to coordinate, organize and carry out project implementation. **【Multiple Choice】**

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B20. Be able to effectively communicate with other departments, cooperative units, owners, etc. on project development. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

Goal 5: Lifelong learning

B21. You can continue to learn relevant knowledge in the field of water supply and drainage science and engineering through books, networks, workshops, exchange meetings or joining professional organizations, and constantly improve your professional ability. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B22. You will be able to be competent in the planning and engineering design, construction, operation and management, technical consulting, product development and other work in the field of water supply and drainage science and engineering or related engineering fields through your own study and work experience. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

B23. In the work, I will take the initiative to learn new technologies and new knowledge to improve my professional quality and ability. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

3. Evaluation of the current training objectives

Training Objectives of Water Supply and Drainage Science and Engineering (2021 Edition)

This major aims to cultivate students who adapt to China's new urbanization construction and rural revitalization strategy, meet the needs of regional economic and social development, develop morally, intellectually, physically, aesthetically and laborably, master the basic theoretical knowledge, engineering skills and management methods of the virtuous social cycle process of urban water system, have the ability of teamwork, pioneering and innovative and independent learning, practice the core values of socialism, have a sense of social responsibility and sustainable development, have humanistic qualities, professional ethics and innovation and entrepreneurship awareness, and can be able to ensure water quality safety, In the fields of sewage treatment and recycling, comprehensive improvement of water environment, building water supply and drainage, smart water affairs and engineering management, engaged in design, construction, operation, management and preliminary research and development, and can serve high-quality application-oriented engineering and technical talents in water supply and drainage science and engineering and related industries.

Students of this major are expected to achieve the following goals about 5 years after graduation:

(1) Be able to practice the core values of socialism, uphold the concept of sustainable development, actively fulfill social responsibilities, have a sound personality and good humanities

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and social science literacy, and abide by professional ethics and engineering ethics.

(2) Be able to adapt to the development requirements of the field of water supply and drainage science and engineering, have the professional knowledge related to the comprehensive application of water supply and drainage science and engineering, be able to engage in the design, construction, operation, management and other work in related fields, have the ability of preliminary research and development, and have the ability to serve as an engineer or professional technical leader.

(3) Have a good team spirit and certain organizational and communication skills, and be able to play a team role and management role in the water engineering project team such as engineering planning, design, construction, operation and management.

(4) Have the awareness of innovation and entrepreneurship, independent learning and lifelong learning, and be able to continuously learn and apply new theories, new methods, new technologies and new equipment in the fields of water supply and drainage science and engineering to solve complex engineering problems in related fields.

C1. The existing training can be adapted to the needs of the times: [Multiple choice questions]

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C2. Existing training can be applied to professional development: [Multiple choice question]

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C3. Positioning of professional talents in the training objectives (**high-quality application-oriented engineering and technical talents in water supply and drainage science and engineering and related industries**) and school positioning: [Multiple choice question].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C4. The professional fields in the training objectives (**water quality safety assurance, sewage treatment and recycling, comprehensive improvement of water environment, building water supply and drainage, smart water affairs and engineering management, etc.**) are clear and reasonable: [Multiple choice question].

1. Very much in line with
2. Compliant
3. Basically compliant

4. Non-conformity

C5. The characteristics of the target occupation (**engaged in design, construction, operation, management and preliminary research and development**) are clear and reasonable: [multiple choice question].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C6. Compared with the graduation requirements at the time of graduation, the existing training goals have been significantly improved through 5 years of development in terms of vocational ability, professional competitiveness and achievement: [Multiple choice question]

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C7. Please combine your actual work situation and enterprise needs about 5 years after graduation, and evaluate the reasonableness of your ability to achieve goal 1 (**be able to practice the core values of socialism, uphold the concept of sustainable development, actively fulfill social responsibilities, have a sound personality and good humanities and social science literacy, and abide by professional ethics and engineering ethics standards**). [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C8. Please evaluate the reasonableness of your ability to achieve goal 2 (**be able to adapt to the development requirements of the field of water supply and drainage science and engineering, have the professional knowledge related to the comprehensive application of water supply and drainage science and engineering, be able to engage in the design, construction, operation, management and other work in related fields, have the ability of preliminary research and development, and have the ability to serve as an engineer or professional technical leader**). [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C9. Please combine your actual work situation and enterprise needs about 5 years after graduation, and evaluate the reasonableness of your ability to achieve goal 3 (**have a good teamwork spirit and certain organizational and communication skills, and be able to play a team role and management role in the water engineering project team such as engineering planning, design,**

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construction, operation and management). [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C10. Please evaluate the reasonableness of your ability to achieve goal 4 (**have the awareness of innovation and entrepreneurship, independent learning and lifelong learning, and be able to continuously learn and apply new theories, new methods, new technologies and new equipment in the fields of water supply and drainage science and engineering to solve complex engineering problems in related fields**) based on the actual work situation and enterprise needs of the enterprise about 5 years after graduation. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

C11. Do you have any comments or suggestions on the revision of the professional training plan_____?

Chapter 4 Opinions and Suggestions on the School

1. School infrastructure

D1. Classrooms, laboratories and equipment meet the needs of teaching in terms of quantity and function. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

D2. The laboratory and equipment have a good management, maintenance and update mechanism, and students can use it conveniently. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

D3. Cooperate with enterprises to build internship and training bases, and provide students with a platform to participate in practice in the teaching process. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

D4. Computer, network and library resources can meet the needs of daily learning, teaching and scientific research. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

D5. The school can provide the infrastructure needed to meet the graduation requirements, including providing effective support for students' practical activities and innovative activities. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

D6. The school's teaching management and service standards can effectively support the achievement of professional graduation requirements. [Multiple choice].

1. Very much in line with
2. Compliant
3. Basically compliant
4. Non-conformity

2. Professional personnel training

D7. Your overall satisfaction with professional education and teaching is: [Multiple choice].

1. Very satisfied
2. Relatively satisfied
3. General
4. Relatively unsatisfied

D8. Your satisfaction with the professional practice teaching link (including experimental teaching, internship and apprenticeship, etc.) is: [Multiple choice].

1. Very satisfied
2. Relatively satisfied
3. General
4. Relatively unsatisfied

D9. What kind of practical teaching do you think needs to be strengthened? [Multiple choice questions].

1. Curriculum design
2. On-campus professional practice/internship training/course experiments
3. Short-term (1-2 weeks) off-campus internship/apprenticeship/social investigation, etc
4. Graduation internship (such as professional internship, etc.)
5. Graduation project/graduation thesis
6. Innovative experimental plan for college students
7. Miscellaneous

D10. In addition to practical teaching, what do you think needs to be improved in professional teaching: [Multiple choice questions].

1. The courses offered need to be closer to the needs of the job
2. The course content is updated in combination with the development of science and technology
3. Classroom teaching needs to pay more attention to ability development
4. The course assessment method needs to be more optimized
5. Miscellaneous
6. Overall very good and no need for improvement

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D11. For current learning, the most important aspect of professional education that needs to be improved is [multiple choice questions].

1. Knowledge of public courses
2. Knowledge of professional basic courses
3. Knowledge of major courses
4. Practice hands-on skills
5. Research methods training
6. Academic critical thinking skills
7. Literature retrieval and summary ability
8. Writing skills
9. Interpersonal and communication skills
10. Cannot be evaluated

D12. Would you recommend your alma mater to others? [Multiple choice].

1. Willing
2. Unwilling

D13. Through work practice, what aspects do you think university education should be further strengthened: (multiple choices) [multiple choice questions].

1. Ideological and moral literacy
2. Basic knowledge of the profession
3. Practice hands-on skills
4. Ability to work independently
5. Ability to innovate
6. Interpersonal skills
7. Professionalism
8. Team spirit
9. Cross-professional knowledge development
10. Ability to apply foreign language or practical writing
11. Career planning and guidance
12. Miscellaneous

D14. Do you think the professional courses related to water supply and drainage science and engineering meet the needs of the job? [Multiple choice].

1. Yes
2. No

D15. In professional education, what kind of courses do you think needs to be strengthened the most? [Multiple choice].

1. General education courses (Outline of Modern Chinese History, Ideology, Morality and Rule of Law, etc.)
2. Natural Science Education Courses (Advanced Mathematics A (I), Engineering Mechanics B, etc.)
3. Professional education courses (water supply and drainage pipeline engineering, urban



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stormwater control and simulation, etc.)

4. Professional practice courses (comprehensive design of building water supply and drainage engineering, process design of water purification plant and sewage treatment plant (including economic cost analysis), etc.).

5. Professional ability development courses (innovation and entrepreneurship for college students, etc.)