Undergraduate Talent Cultivation Program for Financial Engineering

(2025 Cohort)

I. Basic Program Information

School	School of Business	**Industry College**	School of Finance
Discipline Category	Economics	**Program Category**	Finance
Program Name	Financial Engineering	**Program Code**	020302
Duration	Four years	**Degree Conferred**	Bachelor of Economics
Total Credits	129	**Total Credit Hours**	2304

II. Program Positioning and Cultivation Objectives

(I) Program Positioning

This program cultivates "Hengxing Five Excellence" (Five Excellence: good character, strong learning ability, solid theoretical foundation, diligent practical skills, international vision) talents and high-quality applied professionals. Students will: uphold socialist core values with sound moral cultivation and comprehensive quality; meet the needs of socialist modernization and achieve well-rounded development in morality, intelligence, physical fitness, aesthetics and labor; participate in the "Four Educations and Four Achievements" learning activities (Four Educations: ideological and political education, general education, professional education, and innovation & entrepreneurship education; Four Achievements: education to become a full person, education for growth, education for talent, and education for success); master the core theories, techniques and methods of modern finance, together with essential knowledge of management, economics, law and information technology closely related to the financial field; acquire fundamental capabilities for finance-related professions; possess strong financial market analysis ability, financial product design and pricing ability, risk management ability, as well as sound practical ability, innovation ability and teamwork ability; and be competent for positions involving financial analysis, planning and decision-making in financial institutions and enterprises and institutions at home and abroad, such as securities investment trading, comprehensive banking business, insurance market business and corporate finance.

(II) Cultivation Objectives

Graduates are expected to achieve the following objectives approximately five years after graduation:

Objective 1: Proficiently master the theoretical knowledge required for professional qualification in the financial field, and be familiar with the fundamental professional knowledge of financial engineering.

Objective 2: Possess basic abilities in reading, writing and translating foreign-language literature related to financial engineering, and the ability to use technology and software to solve professional problems.

Objective 3: Have good humanities and social sciences literacy, social responsibility and financial professional ethics, and be familiar with national policies, laws and regulations related to the financial industry.

Objective 4: Be able to grasp the current development status and trends of this discipline and related fields, and possess professional capabilities in financial market analysis, product innovation and risk management.

Objective 5: Possess a sense of family and national responsibility of serving national strategies, practicing social responsibility and contributing to economic and social development, together with cross-cultural communication and cooperation ability, and embrace the value pursuit of "excelling in the marketplace while keeping the world at heart."

(III) Correspondence Between Curriculum and Cultivation Objectives

Table 1 Correspondence Between Curriculum and Cultivation Objectives

Curriculum System	Obj. 1	Obj. 2	Obj. 3	Obj. 4	Obj. 5
1. Introduction to Financial Engineering				✓	
2. Political Economics					✓
3. Microeconomics	✓				
4. Macroeconomics	✓				
5. Fundamentals of Accounting	✓				
6. Money and Banking	✓				
7. Public Finance			✓		
8. Econometrics		✓			
9. Statistics		✓			
10. Corporate Finance	✓				
11. Securities Investment		✓			
12. Financial Risk Management			✓		
13. Financial Engineering				✓	
14. Financial Econometrics		✓			
15. Commercial Banking Business	✓				
16. Insurance	✓				
17. Innovative Design Thinking					✓
18. Foundations					✓

of Entrepreneurship					
19. Entrepreneurial Risk Management			✓		
20. Financial Data Mining Case Practice				✓	
21. Graduation Internship					✓
22. Graduation Thesis (Design)		✓			

III. Fundamental, Core, Elective and Characteristic Courses

(I) Fundamental Courses (9 courses, 21 credits)

Introduction to Financial Engineering (1 credit), Political Economics (2 credits), Microeconomics (3 credits), Macroeconomics (3 credits), Fundamentals of Accounting (2 credits), Money and Banking (2 credits), Public Finance (2 credits), Econometrics (3 credits), Statistics (3 credits).

(II) Core Courses (7 courses, 20 credits)

Corporate Finance (3 credits), Securities Investment (3 credits), Financial Risk Management (3 credits), Financial Engineering (3 credits), Financial Econometrics (3 credits), Commercial Banking Business (3 credits), Insurance (2 credits).

(III) Elective Courses (16 courses, 32 credits)

Financial Intermediaries (2 credits), Investment Banking (2 credits), International Finance (2 credits), Fixed Income Securities (2 credits), Financial Markets (2 credits), Corporate Credit Management (2 credits), Entrepreneurial Finance (2 credits), International Investment (2 credits), Economic Law (2 credits), Public Relations and Communication (2 credits), International Trade and Practice (2 credits), Management Research Methods and Tools (2 credits), Principles of Management (2 credits), Financial Management (2 credits), Financial Professional Literacy (2 credits), Wealth Management (2 credits).

(IV) Characteristic Course (1 course, 3 credits)

Financial Risk Management (3 credits): Correctly understanding risks existing in financial markets, accurately measuring financial risks using qualitative and quantitative methods, and selecting appropriate risk management strategies to control risks are basic skills that finance professionals must possess. Following the principle of "position applicability, practice integration, and dynamic development" in selecting teaching content, this course employs a variety of teaching methods including lectures, scenario-based teaching and case-based teaching, introduces up-to-date knowledge in real time, and integrates interdisciplinary knowledge points to provide theoretical support for cultivating diversified interdisciplinary financial talents. To meet the needs of applied talent cultivation, "dual-qualified" professional teachers and industry experts are assigned during the course to discuss real cases in financial markets through the university-enterprise cooperation platform, thereby improving students' ability to analyze and solve problems. Meanwhile, with financial-related

competitions such as the "National College Student Financial Challenge Competition" and the "Financial Technology Innovation Competition" as carriers, students are guided to understand industry development trends, truly comprehend the necessity and importance of financial risks and risk management, genuinely integrate theory with practice, and improve their ability to solve practical problems. Through this course, students will be able to effectively identify and avoid risks and conduct relevant business legally and compliantly in their future work, helping them become outstanding financial professionals.

IV. Concentrated Practical Teaching Sessions

(I) Military Skills Training (1 course, 2 credits)

(II) Extension and Enhancement (2 courses, 6 credits)

Graduation Internship (2 credits), Graduation Thesis (Design) (4 credits).

V. Graduation and Degree Conferment Requirements

(I) Graduation Requirements

Students who complete the 129 credits stipulated in this cultivation program, achieve passing grades, and meet the requirements of the Regulations on Student Status Management of Qingdao Hengxing University of Science and Technology will be awarded the undergraduate diploma of Financial Engineering from Qingdao Hengxing University of Science and Technology.

(II) Degree Conferment Requirements

Students who meet the graduation requirements and the requirements of the Implementation Rules for Conferring Bachelor's Degrees of Qingdao Hengxing University of Science and Technology will, upon review and approval by the University Degree Committee, be conferred the Bachelor of Economics degree by Qingdao Hengxing University of Science and Technology.

VI. Program Teaching Implementation Plan

Table 2 Teaching Implementation Plan for Financial Engineering

Course Type	Level / Module	Course Name	Code	Nature	Credits	Hours	Semester Offered	Assessment	Offering Unit
General Education	Ideological & Political Courses	Ideological Morality and Rule of Law	3000000101	Compulsory	3	48	Sem 1	Exam	School of Marxism
		Outline of Chinese Modern History	3000000102	Compulsory	3	48	Sem 2	Exam	School of Marxism
		Basic Principles of Marxism	3000000103	Compulsory	3	48	Sem 3	Exam	School of Marxism
		Introduction to Mao Zedong	3000000104	Compulsory	3	48	Sem 4	Exam	School of Marxism

		Thought and the Theoretical System of Socialism with Chinese Characteristics							
		Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	3000000147	Compulsory	3	48	Sem 5	Exam	School of Marxism
		Situation and Policy I–VIII	3000000105–185	Compulsory	0.25 each	8 each	Sem 1–8	Assessment	School of Marxism
		Subtotal 1: 17 credits / 304 hours (5 exam courses)							
	Mathematics & Science Courses	Advanced Mathematics B I	3000000162	Compulsory	4	64	Sem 1	Exam	School of Education
		Advanced Mathematics B II	3000000163	Compulsory	4	64	Sem 2	Exam	School of Education
		Linear Algebra	3000000113	Compulsory	2	32	Sem 2	Exam	School of Education
		Probability Theory and Mathematical Statistics	3000000114	Compulsory	2	32	Sem 4	Exam	School of Education
		Subtotal 2: 12 credits / 192 hours (4 exam courses)							
	Tool Courses	Digital Intelligence English I–IV	3000000010B–E	Compulsory	2 each	64 each	Sem 1–4	Exam	International Education College
		Digital Intelligence Literacy	3000000186	Compulsory	2	32	Sem 1	Assessment	Information Engineering College
		Information Retrieval and Utilization	3000000134	Compulsory	1	16	Sem 3	Assessment	Library
		Subtotal 3: 11							

		credits / 304 hours (4 exam courses)							
	Military & Physical Education Courses	Military Theory	3000000131	Compulsory	2	32	Sem 1	Assessment	Student Affairs Office
		College Physical Education I–IV	3000000192–195	Compulsory	1 each	36 each	Sem 1–4	Assessment	School of Physical Education
		Subtotal 4: 6 credits / 176 hours							
	Comprehensive Quality Courses	Mental Health Education	3000000129	Compulsory	2	32	Sem 1	Assessment	School of Education
		Chinese Traditional Culture Education	3000000197	Compulsory	1	16	Sem 1	Assessment	School of Humanities
		National Security Education	3000000187	Compulsory	1	16	Sem 1	Assessment	School of Marxism
		College Student Career Development Planning	3000000132	Compulsory	1	16	Sem 1	Assessment	School of Business
		College Student Employment Guidance	3000000133	Compulsory	1	16	Sem 6	Assessment	School of Business
		Subtotal 5: 6 credits / 96 hours							
	Interdisciplinary Courses	Art Literacy Course	—	Restricted elective	2	32	—	Assessment	Various colleges
		International Literacy Course / Activity	—	Restricted elective	1+1	16+16	—	Assessment	Various colleges
		Social Science Course	—	Free elective	0	0	—	Assessment	Various colleges
		Natural Science Course	—	Free elective	2	32	—	Assessment	Various colleges
		Subtotal 6: 6 credits / 96 hours							
	TOTAL 1 (General Education)				58	1168			
Profession	Fundament	Introductio	302030223	Compul	1	16	Sem 1	Assess	School of

al Courses	al Courses	n to Financial Engineering	4	sory				ment	Business
		Political Economics	3020302261	Compulsory	2	32	Sem 1	Exam	School of Business
		Microeconomics	3020302205	Compulsory	3	48	Sem 1	Exam	School of Business
		Macroeconomics	3020302219	Compulsory	3	48	Sem 2	Exam	School of Business
		Fundamentals of Accounting	3120203224	Compulsory	2	32	Sem 2	Exam	School of Business
		Money and Banking	3020302262	Compulsory	2	32	Sem 3	Exam	School of Business
		Public Finance	3020302263	Compulsory	2	32	Sem 3	Exam	School of Business
		Statistics	3020302224	Compulsory	3	48	Sem 4	Exam	School of Business
		Econometrics	3020302204	Compulsory	3	48	Sem 5	Exam	School of Business
		Subtotal 1: 21 credits / 336 hours (8 exam courses)							
	Core Courses	Corporate Finance	3020302235	Compulsory	3	48	Sem 5	Exam	School of Business
		Securities Investment	3020302236	Compulsory	3	48	Sem 5	Exam	School of Business
		Financial Risk Management	3020302206	Compulsory	3	48	Sem 6	Exam	School of Business
		Financial Engineering	3020302237	Compulsory	3	48	Sem 6	Exam	School of Business
		Commercial Banking Business	3020302238	Compulsory	3	48	Sem 6	Exam	School of Business
		Financial Econometrics	3020302215	Compulsory	3	48	Sem 7	Exam	School of Business
		Insurance	3020302239	Compulsory	2	32	Sem 7	Exam	School of Business
		Subtotal 2: 20 credits / 320 hours (7 exam courses)							
	Elective Courses (Professional Direction)	International Finance	3020302225	Restricted	2	32	Sem 6	Assessment	School of Business
		Investment Banking	3020302251	Restricted	2	32	Sem 6	Assessment	School of Business
		Financial	302030224	Restrict	2	32	Sem 6	Assess	School of

		Markets	4	ed				ment	Business
		Entrepreneurial Finance	3020302248	Restricted	2	32	Sem 6	Assessment	School of Business
		International Investment	3020302230	Restricted	2	32	Sem 6	Assessment	School of Business
		Principles of Management	3120104202	Restricted	2	32	Sem 6	Exam	School of Business
		Public Relations and Communication	3120200211	Restricted	2	32	Sem 6	Assessment	School of Business
		Financial Professional Literacy	3020302272	Restricted	2	32	Sem 6	Assessment	School of Business
		Financial Intermediaries	3020302240	Restricted	2	32	Sem 7	Assessment	School of Business
		Fixed Income Securities	3020302226	Restricted	2	32	Sem 7	Assessment	School of Business
		Corporate Credit Management	3020302247	Restricted	2	32	Sem 7	Assessment	School of Business
		Economic Law	3120201229	Restricted	2	32	Sem 7	Exam	School of Business
		International Trade Practice	3020302228	Restricted	2	32	Sem 7	Assessment	School of Business
		Management Research Methods and Tools	3120201249	Restricted	2	32	Sem 7	Assessment	School of Business
		Corporate Financial Management	3120200204	Restricted	2	32	Sem 7	Exam	School of Business
		Wealth Management	3020302249	Restricted	2	32	Sem 7	Assessment	School of Business
		Subtotal 3: ≥6 credits / ≥96 hours (3 exam courses)							
	Professional Extension Courses	Python Programming	3020302252	Restricted	2	32	Sem 3	Assessment	School of Business
		Simulated Investment Competition Series	3020302253	Restricted	2	32	Sem 3	Assessment	School of Business
		Comprehensive	3020302250	Restricted	2	32	Sem 5	Assessment	School of Business

		Finance (Professional Master's Level)							
		Digital-Intelligence Enterprise Sand-Table Simulation Experiment	3120201307	Restricted	2	32	Sem 5	Assessment	School of Business
		Subtotal 4: ≥4 credits / ≥64 hours							
	TOTAL 2 (Professional Courses)				≥51	≥816			
Innovation & Entrepreneurship Courses	Fundamental Courses	Innovative Design Thinking	3000000305	Compulsory	2	32	Sem 3	Assessment	Innovation & Entrepreneurship College
		Foundations of Entrepreneurship	3000000306	Compulsory	2	32	Sem 4	Assessment	Innovation & Entrepreneurship College
	Practice Courses	Entrepreneurial Risk Management	3020302302	Compulsory	2	32	Sem 4	Assessment	School of Business
		Financial Data Mining Case Practice	3020302304	Compulsory	2	32	Sem 7	Assessment	School of Business
	TOTAL 3 (Innovation & Entrepreneurship)				8	128			
Concentrated Practical Teaching Sessions		Military Skills Training	3000000196	Compulsory	2	32	Sem 1	Assessment	Student Affairs Office
		Graduation Internship	3020302524	Compulsory	2	32	Sem 8	Assessment	School of Business
		Graduation Thesis (Design)	3020302603	Compulsory	4	64	Sem 8	Assessment	School of Business
	TOTAL 4 (Concentrated Practice)				8	128			
Second Classroom Activities		Labor Activities	3000000907	Restricted	1	16	Practice	Assessment	Youth League Committee
		Selective Reading of	3000000901	Restricted	(1)	3	—	Assessment	Youth League

		100 Chinese and Foreign Classic Works							Committee
		College Freshman Orientation	3000000902	Restricted		3	—	Assessment	Youth League Committee
		College Student Associations	3000000904	Restricted		3	—	Assessment	Youth League Committee
		Sports Activities	3000000905	Restricted		4	—	Assessment	Youth League Committee
		Aesthetic Education Activities	3000000906	Restricted		3	—	Assessment	Youth League Committee
		Ideological & Political Literacy	3000000908	Free	(2)	(32)	Practice	Assessment	Youth League Committee
		Association & Cultural-Sports Activities	3000000909	Free			—	Assessment	Youth League Committee
		Volunteer & Public Welfare Services	3000000910	Free			—	Assessment	Youth League Committee
		Innovation, Entrepreneurship & Creation	3000000911	Free			—	Assessment	Youth League Committee
		Practice, Internship & Training Activities	3000000912	Free			—	Assessment	Youth League Committee
		Skills & Specialty Development	3000000913	Free			—	Assessment	Youth League Committee
	TOTAL 5 (Second Classroom)				≥4	≥64			
GRAND TOTAL		**Total 1 + Total 2 + Total 3 + Total 4 + Total 5**			**≥129**	**≥2304**	**Sem 1–8**		

IX. Courses Offered to Other Programs (Including Public Elective Courses)

Economics in Daily Life (2 credits), Internet Economics (2 credits), Exploring Wall Street (2 credits), Introduction to Financial Markets (2 credits), Securities Investment Analysis (2 credits), Insurance Theory and Practice (2 credits).

Review and Approval

Type	Position	Name
Revision	Teaching & Research Office Director	Zhang Yawen
	Program Coordinator	Liu Lin
Review	Industry Dean	Wang Wenxiu
	Dean of School	Zhu Yanna
	Executive Dean	Gao Min