Industry-University Collaboration Summary

This document summarises industry-university collaboration including practical teaching, student guidance, collaborative research, and student education services.

3.3 Industry-University Collaboration

Enterprise mentors must closely combine the current industry technological iteration trend, the latest enterprise post ability model, industry access standards and market employment needs, and deeply cooperate with various departments of the university to carry out core construction work such as revision of professional talent training schemes, reconstruction of curriculum systems and upgrading of practical teaching systems. They put forward targeted optimisation suggestions for the teaching key and difficult points, knowledge structure and practical modules of core professional courses, special training courses and innovation and entrepreneurship education courses, promoting the high adaptation of classroom theoretical content to industrial frontier technologies, real enterprise production scenarios and core job ability requirements. At the same time, they actively participate in the regular teaching resource construction of the university, relying on their own enterprise work experience to systematically sort out typical industry practical cases, complete enterprise project process materials, post standardised operation specifications, training safety rules and skill guidance materials, and assist the departments to improve the professional course case base, training resource base and project teaching resource base, making up for the lag of on-campus teaching resources behind the industry, effectively supporting the university's curriculum reform, modular teaching reform and standardised and systematic construction of practical teaching, and continuously improving the professional education adaptability.

3.3.1 Undertaking Practical Teaching Tasks

Enterprise mentors regularly undertake various practical teaching and collaborative teaching tasks for students of the university, fully covering all stages of practical teaching links such as freshman cognitive internship, semester course training, special skill training and graduation on-the-job internship, and are responsible for core work such as on-site practical teaching, hands-on skill guidance and post process explanation. In the process of teaching and guidance, focus on explaining core post operation skills, industry practice norms, modern production operation processes, safety production management standards and application scenarios of industrial frontier technologies, making up for the shortcomings of on-campus theoretical teaching that emphasizes

knowledge rather than practice. They regularly cooperate with full-time on-campus teachers to carry out two-line collaborative teaching work, and regularly enter the school to give industry practice open courses, special lectures on industrial frontier technologies and career development sharing sessions, integrating real experience from the enterprise front line, the latest industry dynamics and employment pain points into classroom teaching. At the same time, in strict accordance with the university's practical teaching management system, they follow up the whole process of students' practice, implement internship attendance management, daily process supervision, practical problem answering, phased achievement comment and internship summary writing guidance, and timely investigate potential safety hazards and skill shortcomings in students' practice, comprehensively ensuring the orderly implementation and quality improvement of the university's practical teaching links.

3.3.2 Guidance on Students' Academic Achievements

The core duties of enterprise mentors include special guidance on students' graduation theses (designs), as well as comprehensive guidance on students' various practical academic achievements and innovative practice. In the guidance of graduation theses (designs), enterprise tutors must base on industry reality, real enterprise projects, industrial technical standards and post application scenarios, and cooperate with on-campus instructors to carry out whole-process guidance on topic selection demonstration, framework design, empirical research, content polishing and achievement review. They give priority to guiding students to select applied topics close to industrial development, enterprise production, technology research and development and post practice, and eliminate empty, theoretical and impractical graduation thesis (design) topics. In the writing process, they regularly communicate with students, guide students to carry out research combined with real enterprise data, practical cases and technical processes, correct deviations in research direction, empty content and disconnection from practice, strictly control the professionalism, practicability and innovation of graduation theses (designs), and help students successfully complete the defence. In addition, enterprise mentors simultaneously guide students to complete various practical reports, professional project designs and other academic achievements. At the same time, they take the initiative to guide students to participate in discipline competitions, innovation and entrepreneurship training projects, innovation and entrepreneurship competitions and scientific research practice activities, polish competition works and innovation projects combined with industry frontier needs, and focus on cultivating students' engineering practice ability, innovative thinking, problem-solving ability and professional practical ability. For students in off-campus on-the-job internships and post training, they carry out regular one-on-one post guidance, explain post operation specifications, core skill points and workplace work processes in detail, help students quickly familiarise themselves with the workplace environment, accumulate professional post experience and standardise practical behaviour, and consolidate students' professional practice foundation.

3.3.3 Collaborative Teaching Research and Technical Cooperation

Enterprise mentors actively connect with the university's teaching and research work, form a fixed school-enterprise collaborative education teaching research team with on-campus professional teachers, and deeply participate in various university-level and school-level teaching research work such as iterative construction of professional courses, reform of practical teaching modes, optimisation of training curriculum systems and project-based teaching reform. The two sides jointly polish characteristic practical courses adapted to industrial needs, develop school-enterprise co-construction training projects, compile practical teaching handouts, actively apply for various teaching reform topics and teaching achievement awards, and continuously optimise the university's applied talent training teaching mode. At the same time, fully relying on the high-quality resources such as technical reserves, production equipment, R&D platforms and ongoing projects of their affiliated enterprises, they deeply cooperate with the university to carry out in-depth integration of industry, university and research, and actively participate in school-enterprise joint technical tackling, applied project R&D, transformation of technical achievements and cultivation of students' scientific research innovation. Promote the in-depth integration of enterprise industrial technology resources and project resources with university teaching practice, scientific research innovation and talent training work, build a benign collaborative education pattern of 'industry feeds back teaching, teaching supports scientific research, and scientific research empowers industry', and help the university improve the level of professional construction and the ability of scientific research to serve the industry.

3.3.4 Student Education Services and Resource Connection

Supporting documents: Folder 03 Cooperation Agreement (03.1 Training Base Overview, 03.2 Off-campus Enterprise Cooperation Agreement).

In the process of performing their duties, enterprise mentors simultaneously undertake all-round education services such as student professional quality cultivation, career planning guidance and precise employment assistance. Based on years of industry experience, combined with the current industry development trend, employment situation of segmented positions, real enterprise recruitment standards and workplace promotion system, they provide systematic and professional career development guidance for students. Focus on special counselling in aspects such as industry cognition enlightenment, workplace etiquette norms, post ability adaptation, career shortcoming improvement, employment resume polishing, interview skill improvement and career planning formulation, helping students establish a correct outlook on career and employment, and comprehensively improving students' workplace adaptability and core employment competitiveness. At the same time, as the core connection link of in-depth school-enterprise cooperation, enterprise mentors take the initiative to build a communication bridge between the university and enterprises, actively promote the implementation of high-quality enterprise resources on campus, and assist the university in introducing core resources such as enterprise standardised training venues, professional training equipment, real production projects, regular internship positions

and high-quality employment positions, helping schools and enterprises build professional training platforms, stable off-campus internship bases and student innovation practice platforms, continuously consolidating the foundation of the university's industry-education integration education, and ensuring the regular and high-quality implementation of school-enterprise collaborative education work.

3.3.4.1 Teaching Quality Assurance System

The university has built a comprehensive and regular teaching quality assurance system. In strict accordance with Annex F-1 Implementation Measures for Undergraduate Education and Teaching Quality Assurance of Kunming University, a three-level responsibility mechanism of programme director, course teacher and academic tutor is implemented. Through mechanisms such as regular teaching inspection at the beginning, middle and end of the semester, student evaluation of teaching, teaching supervision, course evaluation and rectification review, the whole teaching process is continuously monitored, teaching problems are rectified in a timely manner. Combined with Annex B-8 Kunming University Administration Measures for Evaluating the Achievement of Talent Training Quality and Annex C-3 Kunming University Measures for Evaluating the Attainment of Curriculum Objectives, a closed loop of continuous improvement of teaching quality is formed to steadily improve education quality.

3.3.4.2 Major Transfer Management Policy

To fully respect students' personalised development needs, the university and the school carry out major transfer work in strict accordance with Annex H-1 Implementation Rules for Major Transfer of the School of Mechanical and Electrical Engineering. After completing one academic year of study, students can apply for major transfer in accordance with regulations based on their own interests and professional capacity, while clarifying the restricted conditions for students who cannot transfer majors, such as publicly-funded normal students, targeted students and upgraded students from junior college to undergraduate. The major transfer implements standardised management of the whole process of application, review, public announcement and approval. Students transferred into the programme need to make up for the credits required by the new major to ensure standardised and orderly academic studies. Statistics on major transfer in the past five years are detailed in Annex H-2 Statistics on Major Transfer in the Past Five Years.

3.3.4.3 Minor and Second Degree Management

The university supports students with spare capacity to expand their comprehensive abilities. Undergraduates with a GPA of ≥ 3.1 can apply for a minor programme in their sophomore year, with a total of no less than 30 credits for the minor. Students who complete all credit requirements for both major and minor can obtain a minor programme certificate. Course credits can be mutually recognised and converted in accordance with regulations. Those who fail the assessment can retake the courses in accordance with regulations, which fully fits the relevant requirements of the university's academic management and examination management systems, helping students build a compound knowledge system and improve employment competitiveness.

3.3.4.4 Employment Support and Career Development Services

Supporting documents: Folder 01 Student Handbook (01.1 Student Administration Regulations Compilation, 01.2 Student Handbook).

The university and the school have built a sound employment assistance system, and help students achieve high-quality employment in all aspects through diversified services such as large-scale spring and autumn job fairs, special presentation meetings, alumni sharing sessions, personalised job search guidance, resume optimisation and interview tutoring. The school has set up a special employment work team composed of school leaders, programme directors and graduating class counsellors, who track the employment progress of graduates throughout the process and provide precise assistance to key students.

At the same time, the school deeply links with industry leading enterprises such as Schneider Electric and Zhejiang Shitai Industry to build a school-enterprise talent transmission channel, explore a customised talent training mode, and accurately meet the job demands of enterprises. The university continuously carries out graduate follow-up surveys and employer return visits. The 2023–2025 graduate follow-up feedback, employer satisfaction analysis, outstanding graduate cases and employment statistics are detailed in Annexes H-3, H-4, H-5 and H-6 respectively, providing data support for the continuous improvement of professional talent training and optimisation of employment services.