ASIIN Seal & EUR-ACE® Label

Accreditation Report
Based on an Evaluation Report

Bachelor's Degree Programme
Electronic Information Engineering
Telecommunication Engineering and Management

Provided by
Chongqing College of Mobile Communication (China)

Version: 24 September 2024

Table of Content

Preliminary Note

The following paragraphs are based on the *evaluation report* concerning the named degree programmes dated from March 4, 2022 (see Appendix), in particular the results of the peers' analysis and assessment summarized in section D of the evaluation report. Thus, the evaluation report is the main reference document and substantial base of the accreditation procedure. This report is drafted entirely along the lines of the ASIIN General Criteria and the Subject-Specific Criteria of the relevant Technical Committees 02 – Electrical/Information Technology as well as 04 – Informatics/Computer Science. Hence, ESG 1.1 to 1.10 are fully covered in the combined evaluation and accreditation procedure, as in the respective conclusions of the peers and the Technical Committees (sec. E and F) and in the final decision of the Accreditation Commission (sec. G).

Since the evaluation procedure is tailored to a potential downstream accreditation procedure from the start, the results of the evaluation are summarized accordingly. Thus, "critical concerns", "major recommendations" and "minor recommendations" in the evaluation procedure are considered equivalent to "conditions" (in case of a "suspension of the procedure"), "requirements" (in case of an "accreditation with reservation"), and "recommendations" (in case of an "accreditation with or without reservation"). Consequently, it is ensured that these categories could be easily converted into a proposal for the accreditation of the programmes. Consequently, the accreditation procedure is conducted in a shortened manner, in particularly waiving the regular audit visit of the peer group. A statement of the HEI to the evaluation report, though, is a regular part of that procedure and, as a rule, is regarded in the peers' recommended resolution (see sec. D and E).

A About the Accreditation Process

Name of the degree pro-gramme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
电子信息工程	Electronic Information Engineering	ASIIN	--	02
电信工程及管理	Telecommunication Engineering and Management	ASIIN	--	02, 04

Date of the contract: 12.10.2022

Date of the onsite visit of the preceding evaluation procedure: 15.-17.12.2021 (Remote Audit)

Date of the peer team's statement concerning the accreditation: 14.11.2022

Peer panel:

Dipl.-Phys. Philipp Dedié, PhDSoft-Ingenieure

Prof. Dr. Klaus Lang, University of Applied Sciences Bingen

Prof. Dr. Reinhard Möller, Wuppertal University

Joshua Derbitz, Master student at RWTH Aachen University

Representative of the ASIIN headquarter: Dr. Siegfried Hermes

Responsible decision-making committee: Accreditation Commission for Degree Programmes

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[1] ASIIN Seal for degree programmes; EUR-ACE® Label: European Label for Engineering Programmes

[2] TC: Technical Committee for the following subject areas: TC 02 - Electrical Engineering/Information Technology; TC 04 - Informatics/Computer Science.

Criteria used:

European Standards and Guidelines as of May 15, 2015

ASIIN General Criteria as of December 07, 2021

Subject-Specific Criteria of Technical Committee 02 – Electrical Engineering/Information Technology as of December 9, 2011

Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science as of March 29, 2018

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Electrical Information Engineering	Bachelor of Engineering	--	6	Full time	n/a	8 semesters	240 ECTS	Fall semester
Telecommunication Engineering and Management	Bachelor of Engineering	--	6	Full time	n/a	8 semesters	240 ECTS	Fall semester

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[3] EQF = The European Qualifications Framework for lifelong learning

C Statement of the Higher Education Institution (21.10.2022)

After the completion of the foregoing evaluation, the institution provided a brief statement as well as the following additional documents:

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- Revised learning objectives/outcomes in respective Diploma Supplement (Appendices A1 and A2 to the statement)

- Demonstration of correspondence between respective Module Objective Matrix and curricula (Appendix C to the statement)

- Adapted curricula (Appendices B1 and B2 to the statement)

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- Module Handbooks (Appendices G1 and G2 to the statement)

- Staff development measures (Appendix D to the statement)

- Interim Regulations on Graduate Internship (Appendix F to the statement)

- Management measures College-Enterprise collaboration (Appendix H to the statement)

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- Employment statistics (Appendices I1 and I2 to the statement)

- Press release for some international exchanges (Appendix J to the statement)

- Press releases teachers' awards (Appendix E to the statement)

D   Final assessment of the peers based on the evaluation report and the statement of the HEI (14.11.2022)

Programme-related learning outcomes (ASIIN 1.1) / Diploma Supplement (ASIIN 4.2)

5   The peers appreciate the reformulation of the intended programme-related learning outcomes in the respective Diploma Supplement (DS). Overall, the intended learning outcomes for the *Electronic Information Engineering* (EIE) programme seem to equip graduates with an adequate competence portfolio, which at the same time indicates the application-oriented nature of the programme and the Bachelor level achieved after completion. Regard-

10   ing the DS for the *Telecommunication Engineering and Management* (TEM) programme however, the related learning outcomes in the DS remain somewhat unspecific, especially in a direct comparison with those of the EIE programme. Therefore, the peers still suggest elaborating on the learning outcomes of the TEM programme, which need to indicate the intended subject-specific competences on the Bachelor level of engineering education

15   more clearly (see below, sec. E, requirement 6).

According to the HEI, the adjustment of the intended learning outcomes is due to being implemented in 2023. Moreover, the description in the Diploma Supplement will not be accessible to all stakeholders, in particular the students and potential applicants, as the DS is issued to graduates of the programmes only. Independent of the programme learning

20   outcomes' adequate formulation, the peers also request their easy accessibility for the major stakeholders, especially students and applicants (see below, sec. E, requirement 1).

Furthermore, the peer group esteems CCMC's obvious efforts to demonstrate the correspondence between programme-related learning outcomes on the one hand and the contents of the programme on the other – not least by using Bloom's taxonomy. These efforts

25   principally contribute to evidence the implementation of programme learning outcomes in the curriculum. On the other hand, the apparent incongruence between the programme-specific learning outcomes used in the Module-Objective-Matrices and those included in the mentioned exemplary DS undermine (at least to a certain degree) the overall progress in formulating adequate learning outcomes/objectives. Notwithstanding, the peers en-

30   courage the programme coordinators to check and, if necessary, adapt the intended learning outcomes/objectives on a regular basis.

Staff resources and staff development (ASIIN 3.1)

The peer team takes note that in its recruitment strategy CCMC seems to be intent to en-large the share of PhD holders within its professorial staff. Reportedly, since November 2021 altogether five PhD holders have been appointed professors in the Bachelor pro-
5   grammes under review (three in the EIE programme and two in the TEM programme). The peers also notice that these new professors are doing research in core fields of the respec-tive programme. Thus, experts in the fields of *Communication Signal Processing*, *Micro-wave Technology* and *Image Processing* have been included in the teaching staff of the EIE programme, while the newly recruited PhD holders in the TEM programme broaden the
10   expertise in *Communication Project Management* and *Project Management* respectively. Principally, this is considered a major positive staff development adequately addressing a critical note of the peers in the evaluation report. However, any detailed information about the academic qualification and professional experience of these experts (e.g. staff CV) is lacking as is any information regarding their role and teaching obligations in the respective
15   programme. CCMC is requested to deliver this information in the course of the accredita-tion procedure (see below, sec. E, requirement 2). Apart from this, the peers consider the newly hired PhD holders a significant enlargement of the capacity basis of the degree pro-grammes, which will play a key role in maintaining and further developing the quality of the programmes.

20   In this respect, the peers also appreciate the additional measures CCMC has taken to broaden the qualification profile of its teaching staff. Amongst others, qualified graduates are encouraged to enrol in doctoral programmes at home or abroad, for instance by provid-ing financial incentives, and, additionally, CCMC has established a scientific research award system incentivizing the lecturers' involvement in meaningful research work. In the eyes of
25   the peers, these efforts could meaningfully contribute to keeping the Bachelor pro-grammes up to the demands of the professional and scientific community.

In the course of the evaluation, the peers have criticized the poor staffing of the laboratory units, which in their eyes could seriously affect the full achievement of the application-oriented learning outcomes in the respective courses. CCMC declares to having imple-
30   mented "independent experimental teaching" for classes of 30 students supported by four newly appointed experimental instructors. Although principally welcomed by the peer group, a more detailed account of "independent experimental teaching" as well as about the new experimental instructors (e.g. staff CV) should be provided (see below, sec. E, re-quirement 3).

Graduation practice (mandatory internship) (ASIIN 1.3)

The peers understand that CCMC has changed the rules for the highly important graduation practice in such manner that students no longer can freely choose to conduct the internship either externally in a company or internally at the campus. According to the "Interim Regulations on Graduate Internships of Chongqing College of Mobile Communication" (para 1, 6.4) students generally have to do this training unit in an enterprise or business outside the campus. The new stipulations ensure that each student has meaningful industrial practice before completing his or her studies, which is important for highly practice-oriented degree programmes. They consider CCMC's adaptation of the applicable internship rules appropriately allaying their concerns and do not see the need for further steps of CCMC in this respect.

With the "Interim Regulations on Graduate Internships of Chongqing College of Mobile Communication", CCMC has established a rigorous and reliable framework for the organisation, conduct, supervision and assessment of the graduation practice (company internship). Amongst others, the regulation also includes a fixed schedule for the conduct and completion of the internship. Contrary to its original design, CCMC through this stipulation ensures a comparable student workload for the timely achievement of the intended learning outcomes. Furthermore, the regulation entails many reasonable provisions such as a clear definition of the learning objectives, supervision and guidance, and accompanying requirements. In sum, the peer team finds its concerns regarding the unspecified length of the graduation practice resolved convincingly. From their perspective, the need for correcting measures by CCMC is obsolete.

Course structure (ASIIN 1.3)

In the evaluation report, the peers concluded that the learning objectives of the degree programmes could be even more effectively reached through "streamlining" the course structure in some respects (for instance, e.g. by assembling related courses, enlarging course-specific contents and and/or shortening or dispensing with other courses). Yet, they did not principally question the present structure, but considered efforts in this direction commendable. Now, CCMC declares to having already modified the curricular structure accordingly. In fact, curriculum plans and course specifications have been presented presumably evidencing these changes. However, the documents do not visibly indicate which modifications are to be put into force and for what reasons. Hence, the peers were unable to assess whether these changes adequately take up their suggestion. Since CCMS at the same time indicates that these changes shall be valid from the intakes 2023 onwards, the peers

consider it necessary to carefully look into them in order to assess whether they are targeted appropriately. They deem a respective requirement necessary (see below, sec. E, requirement 5).

Monitoring of student workload (ASIIN 1.5)

5 According to the statement of CCMC, student workload per semester is currently fixed at a maximum of 33 ECTS. In addition, the programme coordinators commit themselves to closely observe the factual workload of students per course and to refine the monitoring system. Although the peer team does not doubt CCMC's pledge regarding the workload, the planned measures appear to be too unspecific ("teachers will investigate students' academic burden in real time and make adjustments according to individual conditions"). The learner-oriented philosophy underlying the ECTS system is still unfamiliar to Chinese students and lecturers. In order to customize the ratio behind it in the college and likewise to systematically include the students' self-assessment in this exercise, the peers hold on their preliminary assessment and propose a respective requirement (see below, sec. E, requirement 4).

College-Enterprise cooperation (ASIIN 3.2)

With the document "The Management Measures for College-Enterprise Cooperation of Chongqing College of Mobile Communication", CCMC provides evidence of an already existing framework for the establishment and operation of this kind of relationship. Obviously, CCMC has thoroughly considered the relevant aspects and summarized them in this manual. By contrast, the discussion with industry representatives in the evaluation process revealed that in their opinion connecting ties could be closer and the cooperation with the college more reliable and structured. According to these voices, which must not be overrated though, the guidelines fixed in the above document seem to be followed only loosely. The peers therefore propose to sensitize CCMC to the issue (see below, sec. E, recommendation 1).

Professional fields and activities of graduates (ASIIN 5)

The peers take note that CCMC systematically tracks the professional fields and activities of its graduates and thus collects relevant information for keeping the programmes up to the demands and developments of the industry. CCMC has thus shown its awareness of this QA issue. However, the table providing evidence for that does not give reliable information about the *job positions* the respective graduates are filling in the employing companies. This information would be worthwhile to see whether the graduates ascend to job opportunities suiting their qualification. Hence, the peers confirm a recommendation underlining this aspect (see below, sec. E, recommendation 2).

Student mobility (ASIIN 1.3)

The peers take note of CCMC's comments on the mobility of students and the efforts undertaken to encourage their ability to engage in study periods abroad. As in their first assessment, they highly appreciate those efforts. They accept that CCMC is aware of the issue and supports the students' mobility as far as possible. Consequently, they waive the option of an additional recommendation to this end.

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E Summary: Peer recommendations (14.11.2022)

Based on the evaluation procedure and taking into account the additional information and the comments given by CCMC, the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Electronic Information Engineering	With requirements for one year	30.09.2028
Ba Telecommunication Engineering and Management	With requirements for one year	30.09.2028

Requirements

For both Bachelor programmes

A 1. (ASIIN 1.1) Make the adjusted programme-related learning outcomes available to the major stakeholders, in particular the students and potential applicants.

A 2. (ASIIN 3.1) Provide adequate information about the academic and professional background of newly recruited PhD holders as well as a about their role and obligations in the respective degree programme.

A 3. (ASIN 3.1) Provide appropriate information about the "independent experimental teaching", as outlined in the statement, and the newly appointed experimental instructors.

A 4. (ASIIN 1.5) Develop and implement a mechanism for a systematic student workload monitoring to identify potential discrepancies between calculated and factual student workload in a timely manner and respond appropriately.

A 5. (ASIIN 1.3) Provide evidence of the structural changes and modifications indicated in the College's statement on the evaluation report (marked study plans and respective course specifications).

For the Bachelor Telecommunication Engineering and Management

A 6.   (ASIIN 1.1) Revise the proposed programme-related learning outcomes in an effort to concretize the intended subject-specific competences in accordance with the Bachelor level of qualification.

5   **Recommendations**

For both Bachelor programmes

E 1.   (ASIIN 3.2) It is recommended to more thoroughly adhere to the self-declared principles for "College-Enterprise Cooperation" (e.g. through implementing an industrial advisory board) in order to strengthen the ties with the companies.

10   E 2.   (ASIIN 5) It is recommended to continually monitor the professional fields *and positions* of activity of the graduates in order to receive more reliably feedback from the businesses about the adequacy of the degree programmes.

F   Comment of the Technical Committees

Technical Committee 02 – Electrical Engineering/Information Technology (25.11.2022)

Assessment and analysis for the award of the ASIIN seal:

5   The Technical Committee discusses the accreditation procedure. Regarding the recommendation 2, the Technical Committee agrees with the peers that the College did not submit enough evidence to prove that it is regularly monitoring the professional paths of the graduates and using this data to adapt the programmes, if necessary. Thus, the Technical Committee explicitly confirms this recommendation. Other than that, the Technical Committee

10   follows the assessment of the peers.

The Technical Committee 02 – Electrical Engineering/Information Technology recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Electronic Information Engineering	With requirements for one year	30.09.2028
Ba Telecommunication Engineering and Management	With requirements for one year	30.09.2028

Technical Committee 04 – Informatics/Computer Science (29.11.2022)

15   *Assessment and analysis for the award of the ASIIN seal:*

The Technical Committee discusses the accrediting procedure. Especially, the requirement A 5 is considered. In order to describe the requirement more clearly, the Technical Committee is in favor of adding the word "University's". Apart from that, the Technical Committee agrees with the proposed resolution of the peers.

The Technical Committee 04 – Informatics/Computer Science recommends the award of the seal as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Electronic Information Engineering	With requirements for one year	30.09.2028
Ba Telecommunication Engineering and Management	With requirements for one year	30.09.2028

Proposed modification by the Technical Committee:

5   A 5.   (ASIIN 1.3) Provide evidence of the structural changes and modifications indicated in the College's statement on the evaluation report (marked study plans and respective course specifications).

G Decision of the Accreditation Commission (09.12.2022)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure intensively and follows the assessment of the peers without any changes.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Electronic Information Engineering	With requirements for one year	30.09.2028
Ba Telecommunication Engineering and Management	With requirements for one year	30.09.2028

Requirements

For both Bachelor programmes

A 1. (ASIIN 1.1) Make the adjusted programme-related learning outcomes available to the major stakeholders, in particular the students and potential applicants.

A 2. (ASIIN 3.1) Provide adequate information about the academic and professional background of newly recruited PhD holders as well as a about their role and obligations in the respective degree programme.

A 3. (ASIN 3.1) Provide appropriate information about the "independent experimental teaching", as outlined in the statement, and the newly appointed experimental instructors.

A 4. (ASIIN 1.5) Develop and implement a mechanism for a systematic student workload monitoring to identify potential discrepancies between calculated and factual student workload in a timely manner and respond appropriately.

A 5. (ASIIN 1.3) Provide evidence of the structural changes and modifications indicated in the College's statement on the evaluation report (marked study plans and respective course specifications).

For the Bachelor Telecommunication Engineering and Management

A 6.   (ASIIN 1.1) Revise the proposed programme-related learning outcomes in an effort to concretize the intended subject-specific competences in accordance with the Bachelor level of qualification.

5   **Recommendations**

For both Bachelor programmes

E 1.   (ASIIN 3.2) It is recommended to more thoroughly adhere to the self-declared principles for "College-Enterprise Cooperation" (e.g. through implementing an industrial advisory board) in order to strengthen the ties with the companies.

10   E 2.   (ASIIN 5) It is recommended to continually monitor the professional fields and positions of activity of the graduates in order to receive more reliably feedback from the businesses about the adequacy of the degree programmes.

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H Fulfilment of Requirements (28.06.2024)

Analysis of the experts and the Technical Committees (14.06.2024)

Requirements

For both degree programmes

A 1. (ASIIN 1.1) Make the adjusted programme-related learning outcomes available to the major stakeholders, in particular the students and potential applicants.

Initial Treatment	
Peers	fulfilled Justification: CCMC has provided the experts with links to University websites, where the programme learning outcomes as well as other relevant information concerning the degree programmes (Module Handbooks, curriculum plans) have been published in Chinese and English as well.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Justification: The TC follows the experts' assessment.
AC	fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

A 2. (ASIIN 3.1) Provide adequate information about the academic and professional background of newly recruited PhD holders as well as a about their role and obligations in the respective degree programme.

Initial Treatment	
Peers	fulfilled Justification: CCMC has provided adequate information about the academic and professional background of newly recruited PhD holders in its progress report as well as in appendices A1 and A2.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Justification: The TC follows the experts' assessment.
AC	fulfilled

	Justification: The AC follows the assessment of the experts and the Technical Committees.

A 3. (ASIN 3.1) Provide appropriate information about the "independent experimental teaching", as outlined in the statement, and the newly appointed experimental instructors.

Initial Treatment	
Peers	fulfilled Justification: CCMS has provided appropriate information about the "independent experimental teaching" and "the newly appointed experimental instructors" in its progress report as well as in the appendices B1 and B2.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Justification: The TC follows the experts' assessment.
AC	fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

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A 4. (ASIIN 1.5) Develop and implement a mechanism for a systematic student workload monitoring to identify potential discrepancies between calculated and factual student workload in a timely manner and respond appropriately.

Initial Treatment	
Peers	not fulfilled Justification: It seems that there is a misunderstanding about the purpose of this requirement. It asks for a "mechanism" or an instrument, which measures the actual workload of students thus facilitating an adaptation of the credits awarded for the learning unit or a modification of the volume of contents in case of significant discrepancies. Student workload is more than just attendance-based time and particularly includes the extra-curricular study and preparation time.
TC 02	Not fulfilled Justification: The TC follows the experts' assessment.
TC 04	Not fulfilled Justification: The TC follows the experts' assessment.
AC	Not fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

Second Treatment	
Peers	fulfilled Justification: The College has evidently developed and implemented a mechanism that ensures an effective monitoring, and adaptation if needed, of the student workload.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Justification: The TC follows the vote of the experts.
AC	fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

A 5.   (ASIIN 1.3) Provide evidence of the structural changes and modifications indicated in the College's statement on the evaluation report (marked study plans and respective course specifications).

Initial Treatment	
Peers	fulfilled Justification: CCMS has evidenced through its statement and related appendices (D1 and D2) that the proposed structural changes and modifications in the programmes have been implemented.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Vote: unanimous Justification: The TC follows the experts' assessment.
AC	fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

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For the Bachelor Telecommunication Engineering and Management

A 6.   (ASIIN 1.1) Revise the proposed programme-related learning outcomes in an effort to concretize the intended subject-specific competences in accordance with the Bachelor level of qualification.

Initial Treatment	
Peers	fulfilled Justification: CCMC has revised and adapted the programme-related learning outcomes in such manner that the intended skills and competences of the TEM programme have been concretised

	and clarified in accordance with the Bachelor level of qualification.
TC 02	fulfilled Justification: The TC follows the vote of the experts.
TC 04	fulfilled Justification: The TC follows the experts' assessment.
AC	fulfilled Justification: The AC follows the assessment of the experts and the Technical Committees.

Decision of the Accreditation Commission (28.06.2024)

Degree Programme	ASIIN Seal	Accreditation until max.
Ba Electronic Information Engineering	All requirements fulfilled	30.09.2028
Ba Telecommunication Engineering and Management	All requirements fulfilled	30.09.2028

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I   Decision of the Accreditation Commission (24.09.2024)

The university has submitted an application for the additional award of the EUR-ACE label.

Assessment and analysis for the award of the EUR-ACE® Label:

5   The Accreditation Commission deems that the intended learning outcomes of the degree programmes do comply with the engineering specific parts of Subject-Specific Criteria of the Technical Committee 02 – Electrical Engineering/Information Technology.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Accreditation until max.	Subject-specific label	Accreditation until max.*
Ba Electronic Information Engineering	Without requirements	30.09.2028	EUR-ACE®	30.09.2028
Ba Telecommunication Engineering and Management	Without requirements	30.09.2028	EUR-ACE®	30.09.2028

*Subject to the approval of the ENAEE Administrative Council

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Appendix: Programme Learning Outcomes and Curricula

The following **curriculum** is presented:

a) Curriculum of the Bachelor Electronic Information Engineering

Curriculum plan of Electronic Information Engineering

Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
Mathematical and Physics Foundation	Higher Mathematics (1)	L	C	5	150														
	Higher Mathematics (2)	L	C			5	150												
	Linear Algebra	L	C			4	120												
	Probability Theory and Stochastic Process	L	C					4	120										
	Complex Function	L	C							4	120								
	College Physics（A）	L	C					4	120										
	College Physics Experiment（A）	P	C					3	90										
Fundamentals of Computer	College Computer（Experiment included）	L	C	2	60														
		P		2	60														
	C Language Programming（Experiment included）	L	C			2	60												
		P				2	60												
	JAVA Programming（Experiment included）	L	C					2	60										
		P						2	60										
	Applied Technology of Database（Experiment included）	L	C					2	60										
		P						2	60										
	Principle and Interface Technology of Microcomputer	L	C							4	120								

Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
General Understanding of the Major	Survey of the Development of Electronic Information Engineering	L	C	2	60														
	On the new application of electronic technology in life / Communication Technology in the Information Age / Beidou-Leading the Way of Inquiry (Three choose one)	L	E	2	60														
Fundamentals of Electronic Technology	Basics of Circuit Analysis（Experiment included）	L	C	3.5	105														
		P		1	30														
	Basics of Electronic Circuits（Experiment included）	L	C			3.5	105												
		P				1	30												
	Digital Circuit and Logic Design（Experiment included）	L	C					3	90										
		P						1	30										
	Communication Electronic Circuit（Experiment included）	L	C							3.5	105								
		P								1	30								
	Integrated Design of Electronic Technology Course	P	C									1	30						
Fundamentals of Signal Processing Technology	Signal and System（Experiment included）	L	C							3.5	105								
		P								1	30								
	Digital Signal Processing（Experiment included）	L	C									3.5	105						
		P										1	30						
	Information Theory and Coding	L	C													4	120		

Curriculum plan of Electronic Information Engineering

Module Name	Course Name	Type	Attri-bute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
Fundamentals of Information Transmission Technology	Electromagnetic Field and Wave	L	C									4	120						
	Communication Principles	L	C									4	120						
	Basic experiment of communication technology	P	C									1	30						
	Modern Network Technology (Experiment included)	L	C											2	60				
		P												2	60				
	Principle and Technology of Mobile Communication	L	C													4	120		
Advanced Signal Processing Technology	Digital Image Processing (Experiment included)	L	C													1.5	45		
		P														1	30		
	Speech Signal Processing (Experiment included)	L	C													1.5	45		
		P														1	30		

Curriculum plan of Electronic Information Engineering

Module Name	Course Name	Type	Attri-bute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
Fundamentals of Information System Design	Principle and Application of Single-chip Microcomputer（C Language）(Experiment included)	L	C							2.5	75								
		P								2	60								
	Principle and Application of Single-chip Microcomputer（C Language）（Course Design）	P	C									1	30						
	Principle and Application of Sensor（Experiment included）	L	C									3.5	105						
		P										1	30						
	Electronic Design Automation（Experiment included）	L	C									2.5	75						
		P										2	60						
	Altium Design and application（Experiment included）	L	C											2.5	75				
		P												2	60				
	Radio Frequency Identification Technology（Experiment included）	L	C													3	90		
		P														1	30		
Design of Comprehensive Information System	Embedded System（Experiment included）	L	C											3.5	105				
		P												1	30				
	Application of DSP Chip（Experiment included）	L	C											3.5	105				
		P												1	30				
	Design and Innovation of Electronic System（Experiment）	L	C													2.5	75		
		P														2	60		

Curriculum plan of Electronic Information Engineering

Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
Graduation Project	Corporate/On-campus Internship	P	C													9	270		
	Graduation Project	P	C															27	16W
Management and Business	Human Resource Management	L	C	1	30														
	Brand and Marketing Management in The Era of Mobile Commerce	L	C			1	30												
	Financial Management	L	C					1	30										
	Strategic Management of Enterprises in the era of "Internet +"	L	C							1	30								
	Consumer Psychology	L	C									1	30						
	Organizational Behavior	L	C											1	30				
	MBA Case Analysis in Information Industry / Network Ethics and E-Commerce Regulations (Two choose one)	L	E											1	30				

Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours
English	College English（1）	L	C	6	180														
	College English（2）	L	C			4	120												
	College English（3）	L	C					4	120										
	College English（4）	L	C							6	180								
	English for IT Professionals	L	C											4	120				
The Practice of Moral, Intellectual, Physical and Aesthetics	Military Theory and Training	P	C	1	30														
	Physical Education（1）	P	C	1	30														
	Physical Education（2）	P	C			1	30												
	Physical Education（3）	P	C					1	30										
	Physical Education（4）	P	C							1	30								
	Outward Development	P	C			0.5	15												
	Competitive Sports	P	C													1.5	45		
	Campus Activity and Social Practice	P	C											1	30				
	Volunteering	P	C											1	30				
	Artistic Accomplishment and	P	C											1	30				

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Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours	
	Practice																			
Occupation Accomplishment Development	Celebrity Forum / Top-teacher Class (Two choose one)	L	E									1	30							
	Guidance for College Students' Mental Health	L	C	1	30															
	Guidence for College Students' Employment and Vocational Development	L	C	0.5	15															
	Basics for College Students' Entrepreneurship	L	C			1	30													
	Key Career Abilities	L	C											1	30					
	Practice for College Students' Enterpreneurship	L	C													1	30			
Political Thought and Moral Cultivation	Ideological Education and Fundamentals of Law	L	C	1	30															
	Compendium of Modern Chinese History	L	C					1.5	45											
	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics	L	C									1.5	45							
	Basic Principles of Marxism	L	C											2	60					

Curriculum plan of Electronic Information Engineering

Module Name	Course Name	Type	Attribute	S1 CP	S1 Hours	S2 CP	S2 Hours	S3 CP	S3 Hours	S4 CP	S4 Hours	S5 CP	S5 Hours	S6 CP	S6 Hours	S7 CP	S7 Hours	S8 CP	S8 Hours	
	Situation and Policy	L	C															0	0	
Philosophy and Social Sciences	The World Created by Socrates Confucius	L	C	1	30															
	Modern Journey of European Civilization	L	C					1	30											
	On Justice	L	C							1	30									
	Economics in Life	L	C									1	30							
	Information technology and society / Ethics in life sciences / History of Western Philosophy (Three choose two)	L	E							1	30	1	30							
Humanities and art	Appreciation of classic movies / Persuasion and reasoning (Two choose one)	L	E					1	30											
	Creative Writing	L	C			1	30													
	From Novel to Film	L	C					1	30											SUM
	CP/Semester			30		29.5		29.5		31.5		30		30.5		32		27		240

b) *Curriculum of the Telecommunication Engineering and Management*

Module name	Course Name	Type	S1 CP	S1 H	S2 CP	S2 H	S3 CP	S3 H	S4 CP	S4 H	S5 CP	S5 H	S6 CP	S6 H	S7 CP	S7 H	S8 CP	S8 H
Module 1 Mathematics & Physics Science Fundamentals	Higher Mathematics （1）	L	6	180														
	Higher Mathematics （2）	L			4.5	135												
	Linear Algebra	L			3	90												
	Probability Theory and Stochastic Process	L					4.5	135										
	College Physics (A)	L			4.5	135												
	College Physics Experiment (A)	P					3	90										
Module 2 Computer Fundamentals	College Computer	L	1.5	45														
	College Computer	P	1.5	45														
	C Language Programming	L			3	90												
	C Language Programming	P			3	90												
	Applied Technology of Database	L									3	90						
	Applied Technology of Database	P									1.5	45						
Module 3 Engineering fundamentals	Basics of Circuit Analysis	L	4	120														
	Basics of Circuit Analysis	P	1	30														
	Electronic Technique Foundation	L					6	180										
	Electronic Technique Foundation	P					1.5	45										
	Signal and System	L							4.5	135								
	Signal and System	P							1	30								
Module 4 Engineering Practice	Engineering Drawing Practice	P			2	60												
	Course Integrated Design of Electronic Technology	P							1.5	45								
	Electric Fitting Practice	P									0.5	15						
	Course Design of Engineering Management Information System	P											3	90				
Module 5 Principle of Engineering Technology	Communication Principles	L									5	150						
	Experiment (Basics of Communication Technology)	P									2	60						
	Modern Information Network and Innovation	L									4.5	135						
	Modern Information Network and Innovation	P									3	90						
	Principles of Telecommunication Transmission	L											6.5	195				
	Principles of Telecommunication Transmission	P											2.5	75				
	Mobile Communication Principle and Technology	L											5	150				
	Mobile Communication Principle and Technology	P											3	90				
Module 6 Engineering Construction	Survey of the Telecommunication Engineering and Management	L	0.5	15														
	Engineering Drafting and CAD	L			2	60												
	Communication Engineering Economics and Economic Evaluation	L									5	160						
	Communication Engineering Economics and Economic Evaluation	P									1	30						
	Telecommunication Engineering Project Budget Application	L									5	160						
	Telecommunication Engineering Project Budget Application	P									1	30						
Module 7	Enterprise Management	L					6	18										

Note: In the table below, each semester column cell shows "credit / hours" as printed in the source (L = Lecture, P = Practice).

Module	Course	Option	Type	1	2	3	4	5	6	7	8
Engineering Management							0				
	Telecommunication Engineering Project Management		L				5 / 160				
			P				1 / 30				
	Operations Management		L							4 / 120	
	Information Resource Management	Two choose one									
	Innovation & Entrepreneurship Management		L							3 / 90	
Module 8 Advanced technology & Applications	Telecommunication Engineering Budding and Tendering	Two choose one	L				4 / 120				
	Telecommunication Bearer Network Engineering Application										
	Telecommunication Engineering Security Management	Two choose one	L						4 / 120		
	Telecom Cloud Theory and Technology										
	Telecommunication Engineering Planning and Optimization		L							6 / 180	
Module 9 Comprehensive Internship (Two choose one)	Enterprise Practice	Outside campus	P								
	Practice of Mobile Communication	Inside Campus									
	Practice of Switching Technology		P							9 / 270	
	Network and Security Technology Practice										
	Practice of Wideband Access Technology										
	Telecommunication Operation Management Simulation Practice										
	IT project management sandtable simulation										
Module 10 Bachelor Thesis	Graduation Project (Thesis)		P								27 / 810
Module 11 English	College English (1)		L	6 / 180							
	College English (2)		L		4 / 120						
	College English (3)		L			4 / 120					
	College English (4)		L				6 / 180				
	English for IT Professionals		L						4 / 120		
Module 12 12. Occupation Accomplishment Development	Guidance for College Students' Employment and Vocational Development		L	0.5 / 15							
	Guidance for College Students' Mental Health		L			1 / 30					
	Key Career Abilities		L						1 / 30		
	Basics for College Students' Entrepreneurship		L		0.5 / 15						
	Practice for College Students' Entrepreneurship		P						1 / 30		
Module 13 Management and Business	Human Resource Management		L	1 / 30							
	Financial Management		L			1 / 30					
	Strategic Management of Enterprises in the era of "Internet +"		L				1 / 30				
	Organizational Behavior		L						1 / 30		
	Consumer Psychology		L					1 / 30			

Module	Course	Select	L&P	S1		S2		S3		S4		S5		S6		S7		S8		SUM
	Brand and Marketing Management in The Era of Mobile Commerce		L											1	30					
	Investment and Financing Management	Two choose one	L							1	30									
	Online Advertising		L																	
Module 14 Humanities and Art	Creative Writing		L			1	30													
	From Novel to Film		L	1	30															
	Classic Speech	Two choose one	L					1	30											
	Rhetoric and Persuasion		L																	
Module 15 Philosophy and Social Sciences	The World Created by Socrates Confucius		L	1	30															
	Economics in Life		L			1	30													
	Modern Journey of European Civilization		L					1	30											
	On Justice		L							1	30									
	On Happiness: Positive Psychology	Three choose two	L							2	60									
	A Brief History of Time																			
	Modern Economic Geography of China																			
Module 16 Political Ideological and Moral	Ideological Education and Fundamentals of Law		L	1	30															
	Compendium of Modern Chinese History		L							1.5	45									
	Basic Principles of Marxism		L	2	60															
Accomplishment	Introduction to Mao Zedong Thought and the Theoretical System of Socialism with Chinese Characteristics		L			1.5	45													
	Situation and Policy		P	0	30			0	30			0	30			0	30			
Module 17 The Practice of Moral, Intellectual, Physical and Aesthetics	Military Theory and Training		P	1	30															
	Physical Education (1)		P	1	30															
	Physical Education (2)		P			1	30													
	Physical Education (3)		P					1	30											
	Physical Education (4)		P							1	30									
	Outward Development		P							0.5	15									
	Competitive Sports		P													1.5	45			
	Campus Activities and Social Practice		P													1	30			
	Volunteering		P													1	30			
	Artistic Accomplishment and Practice		P													1	30			
	Celebrity Forum	Two choose one	L	1	30															
	Top-teacher Class		L																	SUM
CP/ semester				30		31		30		31		32.5		31		27.5		27		240

Note:

1. CP: Credit point
2. W: Week
3. L&P: Learning and practice