



**БОЛОВСРОЛ,
СОЁЛ,
ШИНЖЛЭХ УХААНЫ ЯАМ**



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Consulting Services for Higher Education Reform

CREDIT BASED EDUCATION SYSTEM (Recommendation)

Team of NQF and Credit System

Dr. Sudirman Yahya
International Consultant

Gelegiin Tsagaach
National Consultant



PT.TRANS INTRA ASIA

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Abbreviations

ADB	Asian Development Bank
MNUMS	Mongolian National University of Medical Sciences
ECS	Education, Culture and Science
MECS	Ministry of Education, Culture and Science
HEI	Higher Education Institution
HERP	Higher Education Reform project
Gov.	Government
Mon.	Mongolia
MNUE	Mongolian National University of Education
NUM	National University of Mongolia
NQF	National Qualification Framework
IFE	Institute of Finance and Economics
MUST	Mongolian University of Science and Technology
MOL	Ministry of Labour
GEE	General Entrance Examination

Background

Credit based system is employed to indicate the appropriate amount of learning to acquire qualification under each level of education. The basic principle of credit based system is the notion that each student is entitled to be educated in a place of his/her choice. CREDIT is assigned to each course or module of study and a flexible environment where a student is allowed to take a course within the institution or across institutions is created. It is an indication of respect for students' "autonomy".

In the 21st century, with the help of technological advancement, students are able to create their own education plan across many educational units/institutions in *self-serving* principle. But this opportunity reaches its full potential when all tertiary education institutions perceive and accept this concept in same level.

Credit system, which indicates students' efforts and workloads, places the students in the center of all educational activities and bring education institutions on same platform. That way this system respects students' independence and supports their freedom and "flexibility". Thus, all ambitious education institutions are taking important step towards implementation of credit system. Higher Education Institutions (HEI) of Mongolia must also keep up with it.

Education institutions of Mongolia started implementing credit system since mid-90s. Many important steps and attempts were made. Reforming the old system wasn't easy, especially when it's being implemented on broad spectrum. It was obvious that the new system requires the education staff to learn new ways, to make more efforts, and more importantly to change their mentality. A few numbers of institutions such as Mongolian University of Science and Technology (MUST), National University of Mongolia (NUM), and Institute of Finance and Economics (IFE) have been implementing this practice more successfully than other HEIs. Mongolian National University of Education (MNUE) has also been implementing dramatic changes in this regard in recent two years of education reform. But the implementation of credit system is not enough due to lack of government support and regulation, and confusion and lack of awareness about this concept.

Within the framework of Consulting Services for Higher Education Reform (CSHER), a subproject of Higher Education Reform Project (HERP) which is being implemented with the help of technical support by the Asian Development Bank (ADB), the task of evaluation on credit system of Mongolian HEIs and procession of recommendation was appointed to the NQF and Counselling team that is in charge of credit system issues. Thus, we have developed this recommendation and are presenting it to you. In the development, we made research on successful credit system experiences of leading institutions in USA, Canada, Indonesia, EU as well as in Mongolia.

Credit system education (Example by bachelor degree education)

BACHELOR DEGREE EDUCATION PROCEDURE¹

One. General provisions

1. This procedure applies to organize the education program² to issue bachelor degree according to Higher Education Law and the procedures issued by government organizations of educational issues. Participants in the training are obliged to follow this procedure.
2. The purpose of bachelor degree education is to provide citizens with senior high school education the basic scientific knowledge and capacity to work on high level sectors of education, manufacturing and service, and to provide the theoretical practical knowledge, capacity and social skills for further self-improvement.
3. If any issue can't be regulated by this procedure, it is discussed by the school board and the decision is made by the Principal.

4. *Terms in the procedure*

- 4.1. Higher education degree has levels of bachelor, master and doctor, all measured by credits.
- 4.2. Diploma and bachelor degree. This is the first level of higher education and the attendants are called *students*.
- 4.3. Credits are measurement unit for education contents. This is the basic units for workload of students and lecturers, amount of tuition fee, and main ground for requirements of higher education, planning of the trainings, financing and organization. Assuming that a semester of 16 weeks, a credit equals to 48 hour sessions.
- 4.4. Subject credits are integers that represents the amount of the subject and the amount depends on duration and form of sessions. A credit is determined by following weekly sessions:
 - 1 session of lecture + 2 sessions of self-study activities;
 - 2 sessions of seminar + 1 session of self-study activities;
 - 3 sessions of laboratory activities;
 - Total 48 sessions of internship, bachelor diploma study and other forms of activities are equivalent to a credit.
- 4.5. Session is 50 minutes long and 2 continuous sessions can be 90 minutes without break.

¹ Revision of the amendment #113 of 27th December, 2012 by the Principal of NUM (G.Tsagaach, Sudirman Yahya)

² Online and other courses organized with other universities and institutions are regulated by special procedures

- 4.6. Study plan is a document that presents the volume, order, definition, and internship methods according to the higher education training organization, content volume, list of available and compulsory courses and their credits.
- 4.7. Program is a document that presents contents, evaluation, course volume, necessary books and materials of necessary theoretical and practical knowledge, skills, practice, and attitudes.
- 4.8. Subject index. All subjects in bachelor program have general indexes. An index consists of first four letters of the scientific sector of the subject and a 3 digit number. First digit of the number indicates the level of the subject and the next two digits indicate the code (regarding correlations of the subjects and order). The numbers are as follows:
- 001-099 for non-credit subject
 - 100-199 for first level subject
 - 200-299 for second level subject
 - 300-399 for third level subject
 - 400-499 for fourth level subject
- 4.9. Compulsory subject. A mandatory subject for the program
- 4.10. Elective subject. A list of subjects that a student must choose to complete a level.
- 4.11. Prerequisite subject. A subject that must be passed successfully prior to taking a specific subject.
- 4.12. Corequisite subject. A subject that must be taken with a specific subject.
- 4.13. General education subject. Compulsory and elective subjects that provide scientific basis such as clear speaking and writing, processing of numeric and non-numeric datum, recognizing the reasons of collective idea, effectively working with personnel from other sectors, mutual learning.
- 4.14. Core subject. Compulsory subjects that provide knowledge and skills on basic scientific knowledge, problem solving skills, creative thinking, and provide professional ethics and basic legal ground in given major.
- 4.15. Major subjects. A set of compulsory and elective subjects that provide precise directions and specific knowledge, skills and practice in the given major.
- 4.16. Minor subjects. A set of compulsory and elective subjects that a student who chose a second major other than the main to obtain the systemic knowledge, skills and practice in the second major.
- 4.17. Evaluation of knowledge, skills and practice acquired by a student. A grade that presents how a student performed in acquiring the knowledge, skills and practice of the subject during or at the end of the study plan. A grade can be a “percentage point”, “grades represented by letter”, or “grades represented by number”. The indicators can also be “satisfactory”, “unsatisfactory”, and can be written in “S”, “U” words respectively.

- 4.18. Percentage point. This is a point that evaluates percentage of student's performance assuming that full completion of knowledge and skills are 100%. Percentage points can be formative and summative and presented in integer.
- 4.19. Grade by letter is a grade that represent the performance of the students by A, A-, B, B-, C, C-, D, D-, F letters. These grades are equivalent to 4.0, 3.6, 3.1, 2.7, 2.3, 1.9, 1.4, 1.0, 0 number grades respectively.
- 4.20. Formative grade. This grade represents how the student performed to acquire necessary knowledge and skills.
- 4.21. Summative grade. This is the main indicator how the student performed in acquiring necessary knowledge and skills after the term.
- 4.22. Grade Point Average (GPA) This is the point that each grade point multiplied by number of credits of the subject and divided by total number of credits (Arithmetic weighted average).
- 4.23. Average Grade. This is the accumulative of number and quality indicator of the acquired knowledge and skills by the student, and calculated by same way as GPA.
- 4.24. Internship. This is the course that helps students to implement their knowledge and skills into practice by working in industries, enterprises, organizations and fields.
- 4.25. Bachelor research work. This is the work done by a bachelor graduate to confirm their knowledge and skills acquired in bachelor education program and to acquire the basic knowledge and skills of research work.
- 4.26. General entrance examination. Purpose of this exam is to sort out the university and institution applicants by their knowledge, learning skills and talent and appoint them to respective universities and institutions in accordance with their capacities. This exam is organized nationwide by Education Evaluation Center.

Two. Guideline and organization of bachelor program

5. Guideline and organization for bachelor program is issued by the academic affairs office.
6. Academic affairs office works in accordance with Education Law, Law on Higher Education, other related laws and regulations, school rules and procedures.
7. **Basic functions of academic affairs office**
 - 7.1. Academic affairs office plans the issues of contents, forms and organization of the program and monitors the progress.
 - 7.2. Academic affairs office organizes the enforcement of the decisions regarding the program by State Central Administration Office in charge of Educational Affairs and the school administration.
 - 7.3. Academic affairs office develops confirm and implement the teaching plan, course contents and standards with the structural units.

- 7.4. Academic affairs office implements the study program quality management.
 - 7.5. Academic affairs office evaluates and reports the satisfaction of students on the study program and acquired knowledge, skills and practice. They also provide administration and monitoring to students' self-activities.
 - 7.6. Academic affairs office provides monitoring for implementation of the study program and the technology.
 - 7.7. Academic affairs office develops the policy of managing the workload of teachers, fulfillment of teaching of staff, recruitment, training and development.
 - 7.8. Academic affairs office organizes the issue of evaluation of knowledge and skills of the students and implementation of modern technics, methods and tools of academic activities.
 - 7.9. Academic affairs office provides favorable environment for academic activities, develops policy to improve books and information provision, monitors the implementation of the policy; employ information technology in academic activities; builds academic database.
- 8. Academic affairs office management and organization**
- 8.1. The office manager works under the Vice Principal in charge of academic affairs in accordance with the job description.
 - 8.2. The Principal appoints the office manager who meets the job requirement, is ethic, principled and capable of working with and managing a team, with 3 years of contract. At the end of the term the office manager reports to the administrative board and the evaluation of the board is the ground for contract extension or conclusion. Considering the evaluation the contract may be extended for another term.
 - 8.3. If academic affairs office manager don't submit their reports before the deadline it can be the reason for termination. If the conditions aren't met the board can discharge the manager from employment.
 - 8.4. Depending on the number of students, an instructor is appointed for each 800 students.

Three. Bachelor degree program

9. Entrance

- 9.1. An applicant who passed the general entrance examination can enter the full-time, daytime class if the applicant paid the tuition fee of the first semester and other related fees.
- 9.2. An applicant with a bachelor degree who passed the entrance exam can enter the full-time, evening class or part-time, weekend class in some bachelor program if the applicant paid the tuition fee of the first semester and other related fees. A bachelor applicant applying for a second bachelor major can enter by passing the general entrance examination.
- 9.3. Required subject examination and threshold point is determined by major and study form, and this is announced to the public before February 1st.

- 9.4. Student entrance is confirmed by decree of the Principal. After the decree is issued access information to the school information system is sent via e-mail to the applicant who applied online and student identity card is issued.
- 9.5. If a Mongolian citizen who acquired general education in foreign country may apply if State Central Administration Office in charge of Educational Affairs issued the recommendation that confirms the exam he/she passed in the foreign country is equivalent to the general entrance examination of Mongolia.
- 9.6. Issues regarding the entrance of foreign citizens, scholarship and summer program is regulated by related procedure.
- 9.7. A student may apply from an international or national university/institution or apply for a different bachelor program within the school for a specific reason such as the applicant is willing to change the major in accordance with his/her talent and interest. Such issues are regulated by Student transfer procedure. Main criteria for such matter are the mutual acceptance of credit equivalence and the decision must concern knowledge, skills and practice acquired by the student.

10. Continue studying, applying for a leave

- 10.1. A student may continue studying if the student submitted his/her course selection and paid the tuition fee of the first semester and other related fees. Decision to continue study is confirmed by the decree of the Principal.
- 10.2. If a student is unable to attend to classes for justifiable excuse for more than a month he/she submit an application for a leave up to two semesters to the academic affairs. The office manager's decision in this matter is confirmed by the Principal. Given that an application to extend or reissue the leave is submitted the leave can be extended and total duration of the leave may not exceed 2 years.
- 10.3. Leave duration starts from the beginning of the semester regardless of the time of the application and at the end of the duration the student may apply to continue studying according to the rule 12.1. When the duration of the leave ends and the student continues studying he/she is required to take counsel from academic affairs office, students office, related department or professor team regarding developing study plan, submit selection of courses and other matters.
- 10.4. When the application for leave is approved tuition fee of the first semester is transferred to cover the fee of the next semester and academic service fee is not refunded.
- 10.5. A student is categorized into classes in accordance with their credits accumulated:

0-30 credits accumulated	1 st grade student
31-60 credits accumulated	2 nd grade student
61-90 credits accumulated	3 rd grade student
91 or more credits accumulated	4 th grade student

11. Course, submission to course

- 11.1. Academic affairs office issue and enforce course program³ model regarding the purpose, content, progress of the course, and standard of evaluation for students' knowledge, skills and practice.
- 11.2. Basic standard for course content is developed by respective department/professor team and submitted for approval by the academic council. Contents of the general education subjects must be in accordance with model of Higher Education Standards of Mongolia. Basic standards of the course must be adhered by all teachers giving the course and they can enrich the standards by their knowledge and experiences and regarding the students' major and needs.
- 11.3. Teachers may teach a subject jointly.
- 11.4. Subject index shall not overlap.
- 11.5. Teaching period of the contents of the subject must not exceed the semester. If contents are too much and exceed to next or later semester the course must be divided into prerequisite subjects with different names, indexes and credits. Students must have their knowledge, skills and practices evaluated after each course.
- 11.6. A teacher must upload their subject materials such as lecture notes, seminar exercises, questions, homework, and assignment materials to the school's website to improve the access to them. All subject materials on the website are intellectual property of the school.
- 11.7. A department or a professor team must upload study plan for the course, renewed program for subjects of the semester and teacher info to website before the subject selection begins and work with student affairs and academic affairs instructors to advise the students during the subject selection period.
- 11.8. Subject selection period consists of two parts and is undertaken online. Within 13th and 14th week, a student must select compulsory and elective subjects and submit. Respective department/professor team must determine teachers for specific subjects and provide the information to the academic affairs within 15th and 16th weeks.
- 11.9. Academic affairs office must prepare the information regarding the subjects of the next semester, classrooms, time and teachers during the end-term examination. In the next three weeks, a student must select subjects and submit and if class of desired subject is full he/she must enlist to waiting list.
- 11.10. By paying the tuition fee for selected credits and other fees within the first week of next semester the selection is confirmed. Selections that weren't confirmed within first week are cancelled.
- 11.11. A student may deselect a subject within the submission period.
- 11.12. After the course begins, a student may cancel a selected subject if the teaching period of the course hasn't exceeded 30% and 70% of the tuition fee for the course credit is

³ Internship and laboratory sessions are regulated by related procedure

transferred to next semester. If the teaching period of the course exceeded 30%, no tuition fee is refunded. On either occasion, academic service fee is not refunded.

- 11.13. A new applicant who was granted access to school database via e-mail, must select their subjects and submit before the semester begins and confirmation and cancellation process is regulated as stated in this article
- 11.14. Academic affairs office must solve any problem regarding students' subject selection and issue the course schedule of the semester within first week of the semester. The course schedule may not be changed during the semester.
- 11.15. A student who couldn't make the subject selection within the appropriate period for justifiable excuse may select from available subjects within first 14 days of the semester. Otherwise he/she may pay submission fee and select from available subjects within first 14 days of the semester.
- 11.16. Appropriate number of credit per semester of 16 week is 15 and maximum credit of the selection may not exceed 21. If a student doesn't select any subject parents and other stakeholders must be notified.
- 11.17. A student may submit feedback regarding contents of the course, quality, teacher's methods, ethics, and communication and learning environment after the course ends and before the end-term exams.

12. Duration of the academic-year

- 12.1. An academic year consists of 3 semesters and starts on September 1st.
- 12.2. Fall and spring semesters or first and second semesters consists of 16 weeks of courses, 3 weeks of examinations and no less than 3 weeks of breaks each.
- 12.3. Summer or extra semester mostly consists of weekend or late-courses and internships. Total period is 8 weeks including examination weeks.
- 12.4. Academic year calendar is developed and confirmed in May of the previous year by Administrative Council.

13. Study plan, Study period

- 13.1. Initial model of the study plan is developed and enforced by the academic affairs office.
- 13.2. Structure, contents and requirements of major and corequisite study plan is developed considering feedbacks and advices of respective department/professor team, teachers, students, graduate students and employers. Academic affairs office provides monitoring and academic council provides discussion and decision.
- 13.3. Study plan is confirmed by the Principal finally.
- 13.4. Changes in study plan are initiated by respective department/professor team and academic council submits. Upon discussing the changes academic affairs office makes a decision.

- 13.5. Significant changes in study plan can be employed every four year and changes that don't affect students' course progress such as changes in subject names, indexes and requisitions can be employed every two year.
- 13.6. Bachelor study plan consists of no less than 120 credits of theoretical and practical courses.
- 13.7. Study plan may consist of general education courses, core courses, major and minor courses and sets of elective courses. A study plan structure must be flexible that provide opportunity for students to acquire broad spectrum of general and advanced scientific knowledge, or to acquire a dual major.
- 13.8. When a student apply for a dual major or a different major, the department/professor team offering the plan shall make changes in the plan considering necessary corequisite and prerequisite subjects and specific requirements such as GPA threshold.
- 13.9. The set of general education subjects consists of 36 credits of compulsory and elective subjects. If any of these subjects overlaps with any core subjects other equivalent subject may replace.
- 13.10. Total credit of compulsory and elective core subjects is 39. A student who successfully passed general education set must choose a core set according to his/her specialty and submit the plan to respective department/professor team or academic affairs office for confirmation.
- 13.11. The set of core subjects consists of compulsory and temporary subjects and if the student is studying a single major total credit shall be 30.
- 13.12. Depending on one's need and interest, a student is free to select number of any subjects as long as the total credit doesn't exceed 15. These subjects may be considered as equivalents if the student selects a different or dual major. Prerequisite subjects must be passed prior to selecting these subjects.
- 13.13. A bachelor research work is worth 3 credits and is categorized into major subjects of the main study plan. Requirements and organization of a bachelor research work is regulated by relative procedure.
- 13.14. A student may select subjects worth 30 credits if he/she is to acquire dual majority according to the secondary program offered by the school. The secondary program consists of core and major subjects.
- 13.15. A student who selected dual major must accumulate no less than 130 credits. If the student successfully passed all compulsory general education subjects of his/her major and successfully passed no less than 60% of the core subjects, and meets the requirements by the department/professor team in charge of the second major that the student has selected may submit his/her request to the department/professor team or academic affairs office for confirmation.
- 13.16. A student may apply for a dual major bachelor program to acquire a secondary systemic knowledge, skills and practice if he/she is approved by the department/professor team in charge of the secondary major. If there are same subjects in the main and the

secondary program they shall be considered equivalent. If a student selects a secondary major to acquire dual major the total credit must be no less than 174.

- 13.17. If a student successfully passed all compulsory general education subjects of his/her major and successfully passed no less than 60% of the core subjects, and meets the requirements by the department/professor team in charge of the second major that the student has selected may submit his/her request to the department/professor team or academic affairs office for confirmation.
- 13.18. An applicant who previously had a bachelor degree must accumulate certain amount of credits depending on the similarities between the previous and applied major. Subjects worth up to 60 credits can be considered equivalent from previous major depending on the knowledge, skills and practice acquired by the student and the matter is investigated by the academic affairs office or head of the department/professor team is and final decision is made by the Principal. Other issues concerning credit equivalence is regulated by “Student transfer procedure”.
- 13.19. Regular duration on bachelor program is 4 years and it can be extended by up to 2 years. But it may change depending on the situation.
- 13.20. Leave period is not included in the total period.
- 13.21. Study plan, course schedules are prepared uploaded to school database and website by the academic affairs office at the beginning of the academic year. It’s also mandatory to prepare the info as a handbook to increase access.

14. Evaluation of a student’s knowledge, skills and practice

- 14.1. The main principle to evaluate a student’s knowledge, skills and practice is to support their self-study, and increase the students’ obligation to learn and the teachers’ obligation to teach.
- 14.2. It’s mandatory that the evaluation process of a student’s knowledge, skills and practice is scientifically sound, realistic, just and transparent.
- 14.3. Students of daytime, evening and weekend classes of the same major are evaluated according to same plan, program and contents.
- 14.4. Main form of evaluation of the students’ performance according to the plan is examination. For non-credit subjects, students’ knowledge, skills and practice may be evaluated by test and test procedure follows the same rules.
- 14.5. Knowledge and skills of drawing, computing, laboratory works, practice, bachelor research works and other self-study assignments are evaluated by projects, reports, mid-term check, colloquium, test, précis or other similar forms.
- 14.6. If credits are allocated to internships of the core and major subjects, the report submission should be considered an exam and evaluated by points. Internship report must be submitted within one month after the internship period and internship course is regulated by related procedures.

- 14.7. Performance by a student is indicated by semester and all-time GPAs and Average Points. GPAs and Average grades equal points/grades of the subjects multiplied by respective credits, and the grand total divided by total credit (arithmetic weighted average). The result is rounded by one decimal place.

$$\Gamma O = \frac{\sum_{i=1}^n K_i \cdot O_i}{\sum_{i=1}^n K_i} \quad \Gamma \mathcal{D} = \frac{\sum_{i=1}^n K_i \cdot \mathcal{D}_i}{\sum_{i=1}^n K_i}$$

n - number of subjects

K_i - credit of the (i) subject

O_i (\mathcal{D}_i) – point (grade) on the (i) subject

ΓO ($\Gamma \mathcal{D}$) - GPA (Average Grade)

- 14.8. Students should be aware of their semester and all-time GPA and Average Grade so they can summarize their studying progress and plan further.
- 14.9. Students may be listed by their GPAs and Average Grades by semester, academic year and faculty. GPA and Average Grade is the main factor in rewarding, granting named scholarship, studying abroad, and further study in master degree.
- 14.10. A student must bring his/her student card for the examination.

14.11. Evaluation of a student’s knowledge, skills and practice by subject

- 14.11.1. Performance of the season by a student on particular subject is evaluated by optimal point of 100 according to the “Methodology to evaluate students’ knowledge and skills by points” (Appendix A) and ambition during class, mid-term test results, and end-term examination results are factors.
- 14.11.2. If the student scored 60 or more it’s considered that the student successfully obtained the appropriate knowledge, skills and practices on the subject and the credits are granted. If the score is less than 60, it’s considered that the student’s performance was insufficient and credits are not granted.
- 14.11.3. Test point is 100, same as examinations. If a student’s point is 60 or more the result is considered “satisfactory” and if the point is less than 60 the result is “unsatisfactory”. Grades are marked as “S” and “U” respectively.
- 14.11.4. Correlations between percentage points, grades by letters and grades by numbers are as follows:

Percentage point	Grades by letters	Grades by numbers
95-100	A	4.0
90-94	A-	3.6
85-89	B	3.1

80-84	B-	2.7
75-79	C	2.3
70-74	C-	1.9
65-69	D	1.4
60-64	D-	1.0
0-59	F	0

14.11.5. Aside from these letter and number grades, additional marks such as I, E, NC, CR, R, W, WF, NA, NR, S and U are used. These are used to determine the reason of regression of the student's grade, to monitor the Average Grade for students, to grant opportunity to improve a grade, and to determine how these subjects and results can be equivalent in the matter of transfer to other school. Additional marks are explained below:

I	(Incomplete) Indicates that formative evaluation is incomplete (précis and assignment are incomplete, incomplete internship report, absence during mid-term test etc.) due to justifiable excuse and can be completed during the examination weeks.
E	(Examine incomplete by student) If the student was unable to attend the end-term examination for justifiable reason, the teacher (or academic affairs office manager) shall put this mark.
NC	(No Credit) Indicates that the subject was worth no credit. If the student's selection for non-credit subject is approved and the student passed successfully this mark is filled.
CR	(Credit gRanted) This mark indicates that the credit is granted due to equivalence of a subject that the student had passed in different school. This grade is written as it is in the diploma appendix.
R	(Repeat) If the student requests to repeat a course for specific reason even if he/she successfully passed it, previous grade is replaced by R mark to grant the opportunity to retake the course.
W	(Withdrew) If a student was unable to further study the course or the student considers his/her performance insufficient the student may request to have this mark put instead of a grade. Procedure of retaking the course is same as taking it for the first time.
WF	(Withdrew Failing) If a student performed poorly, it's distinct that the grade would be F, or absence on

	any of the lecture, seminar or workshop is over 1/3 of total number of sessions teacher shall put this mark before the end-term examination.
NA	(grade Not yet Available) Marks that the course is currently not concluded or the student is still studying.
NR	(No grade Reported) This mark is automatically created when the teacher didn't upload the grade before the deadline.
S	(Satisfactory) Indicates that the performance is satisfactory.
U	(Unsatisfactory) Indicates that the performance is unsatisfactory.

14.11.6. The teacher who gave the exam shall upload the results within 5 days after the examination and prepare the table sheet of eligible students and their results with verified signature and submit. The sheet must not be tampered with.

14.11.7. If a student didn't attend the end-term examination without justifiable excuse grade F or "insufficient" will be put. If a student didn't attend the end-term examination for a justifiable excuse E mark may be put considering the proof. If a student with "I" or "E" mark doesn't attend the exam within first month of the next semester the mark will be changed to F.

14.11.8. Credit hours of courses that had markings will not be calculated into the semester grades and total GPA.

14.12. Formative evaluation

14.12.1. Formative evaluation is made on students' efforts to acquire the knowledge, skills and practice to be acquired during the course.

14.12.2. Teachers shall inform the students about how the formative evaluation is made at the beginning of courses.

14.12.3. Formative evaluation consists of activity and participation evaluation (O₁) and performance evaluation (O₂), and each of them is evaluated as per "Methodology to evaluate students' knowledge and skills with points" (Appendix A).

14.12.4. A teacher shall give not less than 2 mid-term examinations when making continuous and equable formative evaluation in his/her course. A teacher may give mid-term examinations in test form with approval from academic affairs office

14.12.5. If a student violates rules of formative evaluation (copying from others, making another student take exam in his/her own name, and using unapproved books or notes etc.), the teacher takes a record of it, gives F grade to the student and reports it to academic affairs office as moral violence.

14.13. Summative examination

- 14.13.1. Summative examination aims at evaluating students' competence and practice to use the theoretical knowledge acquired in a course in cognitive and practical activities.
- 14.13.2. Summative examination is given within 21 days after the semester course is over. The examination schedule is approved by the academic affairs office manager in consideration of majority of students and teacher's opinion, and made public to the teacher and students 2 weeks before the examination and displayed on the information system. Examination teacher and assistants are appointed by director's decree in consideration of department's suggestion.
- 14.13.3. The examination should end before public transportation of the city stops. Summative examination may be given during weekends.
- 14.13.4. If a student is studying with a special plan or not able to take the examination in the scheduled period due to a justifiable excuse, he/she shall notify the academic affairs office manager thereof, and may take the examination in advance or later by a free schedule approved by the academic affairs office manager. In this case, the student is allowed to take courses with a condition to take the examination within the first month of the next semester. In case the student takes the examination and meets other requirements, a decree on allowing him/her to continue his/her study is issued. In other cases such as the student is enrolled in a program to work abroad or goes on a tour, it is not allowed to change the examination period.
- 14.13.5. If a student who has knowledge, skills and practice of foreign language or computer makes a request, an achievement test is given and the student may study the course independently or be excused from the course (consequently, from the summative examination of the course).
- 14.13.6. A student who participated in the training as per study plan, curriculum and technology, completed course practice and on site practice, and the report thereof, completed individual assignments is entitled to take the examination. University administrative council meeting will discuss and resolve whether a student who did not meet these requirements nor has a justifiable excuse will take the summative examination or not.
- 14.13.7. In case an incompatibility of subjects, level of training or examination occurs due to study plan change to a student who came back after a semester leave or delayed his/her study for other reasons, academic affairs office, in cooperation with department/professor team, will determine late-courses and late-examinations regardless of the student's reason for continuing his/her study or previous grades.
- 14.13.8. A student who did not pay the semester tuition fee may not take end-term examination. The name of a student who is not allowed to take end-term examination for specific reasons will not be written in the scorecard of the examination.

- 14.13.9. The form of end-term examination (oral or written etc.) and score allocation will be determined by the teacher within the framework of syllabus of the course and introduced to the students at the beginning of the course. The form of examination, the number of tasks (questions), its content and structure, and answering time must be developed by thorough consideration of teaching methodology. The end-term examination process shall be monitored by department/professor team and academic affairs office.
- 14.13.10. The end-term examination may be in forms of giving tasks (questions) prepared within the framework of course syllabus or open questions, and giving problems to be solved. End-term examination must cover the contents of the course completely and be directed at making a realistic evaluation on students' knowledge, skills and practice. The examiner may ask additional questions, give problems or case studies that are not included in questions to be answered by students but related to the content of the subject.
- 14.13.11. The examiner will determine the rules to be abided during the end-term examination (whether it is allowed to use books or references, or prepared answers to questions etc.). The examiner will confiscate the examination paper of a student who violated the rules of examination (copying from others, making another student take exam in his/her own name, and using unapproved books or notes etc.), takes a record of it, gives F grade to the student and reports it to academic affairs office as moral violence
- 14.13.12. An exemplary student who always participated in the course actively during the semester and successfully took all forms of formative examinations may be given end-term evaluation directly. In this case, the teacher will notify other students of the class and resolve the matter transparently. The number of students to be directly evaluated shall not exceed 10% of examinees.
- 14.13.13. Some subjects that have low volume of content may be taught in sequence (by block) without breaking their correlation in one semester and the examination is given for each of them. Department/professor team manager/leader will propose subjects to be taught by block at the beginning of semester and academic affairs office manager will resolve the proposal and include them in the curriculum.
- 14.14. Repeating course evaluation**
- 14.14.1. If a student had his/her knowledge and skill on course evaluated but couldn't collect 60 or more point he/she must retake the course in order to get the credits.
- 14.14.2. Even if a student managed to collect 60 or more point he/she may retake maximum number of three course (only one time for each) to improve knowledge, skills and practice in those courses.
- 14.14.3. If a student retakes a previously passed course, academic affairs office must change previous grade to "R" in student database.

14.14.4. When retaking a course, a student must register in the class, fully pay for the credits and meet the requirements for that course in order to get his/her grade officially renewed.

14.14.5. In diploma appendix, only latest official grade and credits on each course are written.

14.15. Independent exam

14.15.1. A committee approved by the Principle or academic affairs office may organize independent exams on a course that students had their knowledge, skills and practice evaluated.

14.15.2. Grades of a number of students who took a course under same circumstances (same teacher taught and evaluated) are categorized as follows. If this categorization is violated, teacher's teaching and student's learning procedure is considered faulty and must be reviewed by the academic affairs office. Then academic affairs office may decide whether the evaluation of students' knowledge and skills is unrealistic or unjust. The office may give an independent exam if deems necessary.

Grades by letters	Percentage
A	5-25
A-	
B	15-30
B-	
C	20-40
C-	
D	15-30
D-	
F	0-25

14.16. Resolving complaints about grades

14.16.1. A student may submit a grade for review if he/she thinks the grade is faulty. This request must be submitted to the academic affairs manager in form of paper within first 21 days of the next semester or it's invalid.

14.16.2. A committee approved by the school Principle shall reissue the grade after reviewing the test sheet; and principles, methods and tools (whether the preset answers are actually correct etc.) used to give the grade. If initial grade was faulty according to the review of the committee, only the later grade (whether it's better or worse than the initial grade) issued by the committee is considered final.

14.16.3. There are appropriate amount of fee for reviewing such requests.

15. Official and unofficial documents issued by the school

- 15.1. A student is given a student card after the entrance approval is issued by the Principal. A student may request another card if previous one is lost, destroyed or stolen.
- 15.2. Academic affair office is in charge of issuing recommendation letter and official current grade sheet for students. Unofficial grade sheet may be downloaded from student database at no cost. Official grade sheet must include all grades (including unsuccessful grades) of the student.
- 15.3. If a student successfully graduated without violating any of these rules and met the requirements for bachelor, the degree, its certificate and the badge is awarded.
- 15.4. Academic affairs office may issue recommendation of graduation and official grade sheet for diploma appendix. Grade sheet for diploma appendix shall not include unsuccessful grades the student got during his/her study.
- 15.5. There are appropriate amount fees for each official document.

16. Tuition fee

- 16.1. Tuition fee is the grand total of credit fees of selected courses, other fees regarding academic services. A student must pay the tuition fee each semester.
- 16.2. Other fees consist of some regular payments regarding academic services and administrative costs.
- 16.3. Credit fees may vary between scientific majors.
- 16.4. Other than the tuition fee, a student must pay other payments such as graduation cost and dormitory rent.
- 16.5. A student may apply for scholarships or loans granted by individuals or organizations if he/she meets the requirements.
- 16.6. Fee for each credit and basic charge of a semester must be renewed every year and be approved by the administrative council and shall remain fixed for that academic year.
- 16.7. Rules and procedures regarding all kinds of payments and fees of academic services must be developed and enforced by the school administration prior to the start of the academic year.

17. Dismissal and removal

- 17.1. If a student requests for dismissal he/she may be irrepealably dismissed and academic affairs office shall not refund the academic service fees.
- 17.2. If a student requests for dismissal before 30 percent of the total sessions is complete since the start of the semester, 70 percent of the credits fee shall be refunded. If the 30 or more percent is complete, no credits fee shall be refunded.
- 17.3. Reasons to remove a student are as follows:

- Did not register to the academic affairs office or apply for extension of the leave at the end of his/her leave term,
- Did not select any course for 3 consecutive semesters (including summer semester),
- Being impossible to collect required amount of credits during the main study period,
- Did not pay the tuition fee within the warning period set by academic affairs office due to previous failure to pay the tuition fee according to the contract made with the school or these rules,
- Repeatedly attempted deceptive method to have his/her knowledge, skills and practice evaluated, and attempted to forge the official grade sheet,
- Found guilty of a crime or severe ethical violation by the law enforcement.

17.4. No fee shall be refunded if the student is removed.

18. Graduation

18.1. Graduation committee

- 18.1.1. With approval of the Principal, main committee for the graduation consists of Vice Principal as a chairman, academic affairs manager and faculty heads as members, academic affairs professional as a secretary; and the branch committee consists of product school head as a chairman, heads of departments/professor teams as members, academic affairs professional as a secretary.
- 18.1.2. Main committee provides general management and organization for school-wide graduation, and branch committee for faculty.
- 18.1.3. Main and the branch committee submit their report to the school administration with attached conclusion on quality of the graduates, study program and technologies; and recommendations on further actions.

18.2. Requirement for graduates

- 18.2.1. A graduate must be enrolled according to the relevant rules and by the approval of the Principal.
- 18.2.2. A Graduate must have successfully passed compulsory and elective courses in accordance with the study plan of his/her major, and met the special requirements set by the department/professor team.
- 18.2.3. If a graduate is graduating with dual major or with a secondary major other than the main, he/she must have successfully passed compulsory and elective courses in accordance with the study plan of his/her major, and met the special requirements set by the department/professor team.
- 18.2.4. A graduate must have met the special requirements set within the relevant rules and procedures by the faculty.
- 18.2.5. A graduate is graduated with bachelor degree if he/she passed general education courses, core courses and major courses of the bachelor study plan, proved that

he/she obtained 8th rank of Mongolian National Qualification Framework, and collected no less than 120 credits.

18.2.6. Final GPA must be no less than 2.0.

18.2.7. A graduate must have no remaining payment.

18.2.8. Under specific circumstances, a graduate may be allowed to be graduated with diploma degree if he/she passed general education courses, core courses and some of the major courses of the bachelor study plan, proved that he/she obtained 7th rank of Mongolian National Qualification Framework, collected no less than 90 credits, and final GPA is no less than 2.0.

18.2.9. Within 5 years after the graduation, a diploma degree graduate may continue studying without entrance exam to fully collect the credits, prove that he/she obtained 8th rank of Mongolian National Qualification Framework, and receive bachelor degree.

18.3. Requesting graduation, review of the request

18.3.1. Graduation takes places twice a year, once in fall semester, once in spring semester.

18.3.2. A student who is able to meet the requirement in his/her graduation semester shall request for graduation to the academic affairs office via online.

18.3.3. If a graduate is late for request period for a justifiable cause, his/her graduation is decided by the branch committee with the recommendation of academic affairs office.

18.3.4. Academic affairs office shall review a student's request in consultation with the department/professor team in which the student has studied. Then the office shall notify the student via online whether he/she is eligible to graduate with the information regarding graduation process and ceremony, or regarding graduation requirements that are not met yet.

18.3.5. If a student wasn't able to graduate in that semester, he/she may request again in the next semester.

18.3.6. Branch committee shall submit the list of names of students who are to graduate that semester to the main committee in the beginning of the semester.

18.4. Graduation document

18.4.1. A student who successfully completed the study plan (bachelor or diploma degree), by the decree of the Principal and the decision of the branch committee as basis, may acquire his/her degree, its diploma to certify the achievement and the badge.

18.4.2. A diploma with registration number is fully valid with signatures from school board director, the Principal, chairman of the main graduation committee, head of the faculty, and the stamp of the school.

- 18.4.3. A diploma has appendix and it includes main and secondary major (if any), courses the student took, their credits, their GPAs and points, and other notes in compliance with requirements of eligible organizations. A diploma appendix is validated by academic affairs office manager's signature or stamp.
- 18.4.4. A template for diploma and its appendix is developed and enforced by the academic affairs office.
- 18.4.5. If a student graduated with dual majority, no separate diploma and degree for the secondary major is granted.
- 18.4.6. A special certificate that proves the student has studied all courses in the selected major is granted to the students who passed all required major courses but whose GPA is lower than 2.0.
- 18.4.7. The branch committee submits following materials of a graduate student to the school archive:
- Branch graduation committee decision (the template is developed and enforced by the academic affairs office)
 - A copy of a registration paper for issuance of diploma to the graduate (sorted by majors)
 - Recommendation letter on study period
 - A copy of the diploma
 - Original grade sheet (with appendix) – 1
 - Student card
 - Routing slip
- 18.4.8. Academic affairs office issues recommendation of graduation, original official grade sheet for the diploma appendix. Graduation documents must be available online for checking.
- 18.4.9. If the graduation documents are destroyed, lost or stolen the school may reissue the diploma according to the reference from the archive, and it's regulated by special procedure. If a diploma needs to be reissued because of the committee's fault, the problem must be solved within the graduation period in accordance with the currently enforced rules and procedures.
- 18.4.10. If a student attempted to tamper or forge graduation document he/she shall be held responsible according to the relevant law.
- 18.5. Graduation ceremony**
- 18.5.1. Students receive their diploma and badge with respect in ceremonial manner. The Principal's decree is read at that time.
- 18.5.2. Graduation ceremony is celebrated in manner of education festival and graduates may participate with their friends and parents.
- 18.5.3. Graduates pay some fee for their graduation.

19. Monitoring and assessment on enforcement of the procedure

- 19.1. Academic affairs office and Monitoring, research and assessment office shall constantly monitor and assess enforcement of the procedures. They also shall inform participants about the results and use it to improve the training activities.
- 19.2. Monitoring and assessment on enforcement of the procedure are done based on training documents and materials, reports, research, polls of students, teachers, employees, graduates and employers, independent grade results issued by structural and other units.

* * * * *

Methodology to evaluate students' knowledge and skills

The following methodology is employed in making evaluation on students' knowledge and skills acquired in a course.

$$O = O_1 + O_2 + O_3$$

Here:

- O₁** – *Activity and participation evaluation.* Teacher's evaluation on student's proactive participation in courses and preparation for seminars and practical courses which is between 20-40 points.
- O₂** – *Student's performance evaluation.* Average evaluation point for presentations, abstracts, reports, tests, colloquiums and topics performed during the semester which is between 20-40 points.
- O₃** – *Summative examination evaluation* which is between 20-60 points.

Explanation:

- As for courses for which students' attendance, activity and participation cannot be fully monitored and evaluated, department/professor team will discuss and determine the O₁ point at the lowest possible level.
- Point grades to evaluate students' knowledge and skills may be divided in many ways in each course program and the teacher will follow the division.
- O₁, O₂, O₃ evaluation will consist of integers.

Appendix 1. Credit based system: Current development

We have made the following assessment based on related law, rules, procedures, research reports, certain books and booklets written by scholars on credit based system, overview on formal and informal documents such as internal rules and procedures of HEIs, interviews with high officials of several public and private HEIs, and results of interview with two target groups (the first group is representatives of teachers and staff of HEIs, and the second group is representatives of students).

Legal environment

Mongolian Law on Higher Education was first passed in 1995 and this law first regulated legal matters related to credit based system. For example, Article 4.3 of the law specified that “Higher Education degree shall be bachelor, master and doctoral (Ph.D) degrees measured by credit hours” (legalinfo.mn), and Article 8.7 of the law specified that “Diploma program of higher education shall be not less than 90 credits and including the credits of previous levels, bachelor program shall be not less than 120 credits, master program shall be not less than 150 credits, and doctoral program shall be not less than 210 credits respectively”. In other words, educational program structured by degrees and based on credit hours was a new and unique concept introduced within the framework of education reform of 1995.

Aside from Articles of Mongolian Law on Higher Education, MECS issued Higher Education Policy Recommendation related to introducing academic credit in April, 1996. In the Recommendation, it was reflected that all HEIs should have introduced credit system by 1998.

Consequently, in conformity with this Policy Recommendation, “Procedure for Using Credit in Higher Education Degree Granting Trainings and Evaluating Students’ Knowledge and Skills” was issued in 1998 by the Decree No. 255 of the Minister of Education, Culture and Science (ECS). In order to make this procedure more flexible in response to modern needs and students’ needs, this procedure was amended in 2003 by the Decree No. 158 of the Minister of ECS and enforced thenceforth. Although there were a number of progress by the amendment, a few regression occurred on certain matters.

Table 1. Amendments on “Procedure for Using Credit in Higher Education Degree Granting Trainings and Evaluating Students’ Knowledge and Skills”

Comparison of “Procedure for Using Credit in Higher Education Degree Granting Trainings and Evaluating Students’ Knowledge and Skills” of 1998 and 2003	
Progress	Regression
<ul style="list-style-type: none"> ○ Higher Education Institutions shall determine and adhere to the ratio of classroom and independent learning hours by each type of courses in consideration of established standards. ○ The same credit hours are assigned to courses with the same name and index. ○ In case a subject has to be studied in several semesters because of high volume of content, the subject is divided into successive subjects and 	<ul style="list-style-type: none"> ● An article specifying that “Academic year of higher education institutions shall consist of two semesters and if necessary, a third semester may be added which is a summer semester” was repealed. ● An article specifying that “Credit hour becomes the ground for planning, financing and organization of activities of Higher Education Institutions” was repealed.

<p>each of them is assigned a name, index and credit hour.</p> <ul style="list-style-type: none"> ○ “Student directive hour” was first added in the credit hour of subjects. ○ Credit hours assigned to subjects shall be able to be matched across Higher Education Institutions. ○ 5 scaled system is used in students’ knowledge and skills evaluation. But the scales may be adjusted without changing the overall scale. ○ Regulations are created for students to acquire dual degree by acquiring secondary professional qualification in their field of study or in a different field. ○ It became possible to determine the minimum grade of subjects in consideration of the importance of the subject as well as minimum GPA of subjects depending on certain conditions. 	
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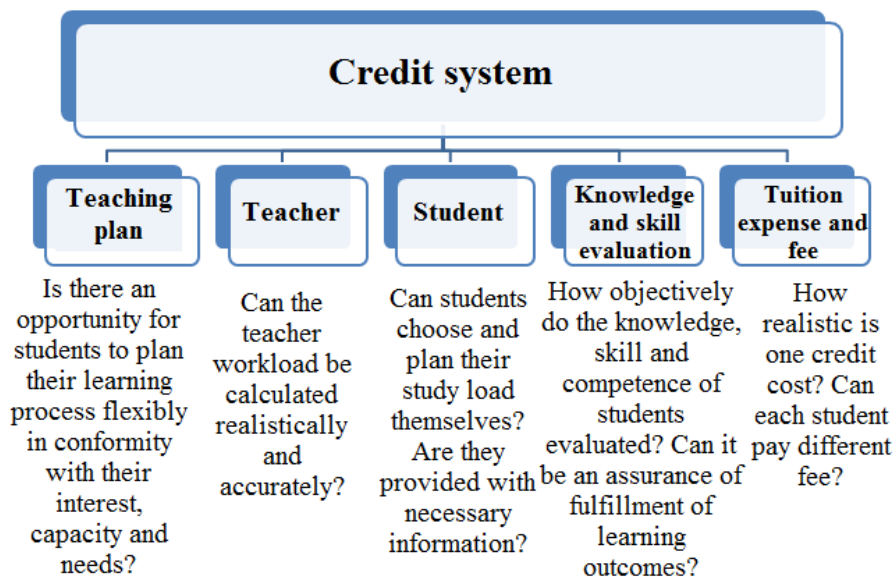
Source: Webpage of MECS

Basically, there were no legal regulation, documents, rules and procedures till now aside from the legal acts mentioned above, and the former acts were not amended. The following part of the recommendation will reflect how the practical implementation of these regulatory documents.

Practical implementation

If we are to define how the credit system implementation is, we should ask the following question related to HEIs. To enquire the answers of these questions, we conducted a research on the implementation level of credit system of target public and private universities.

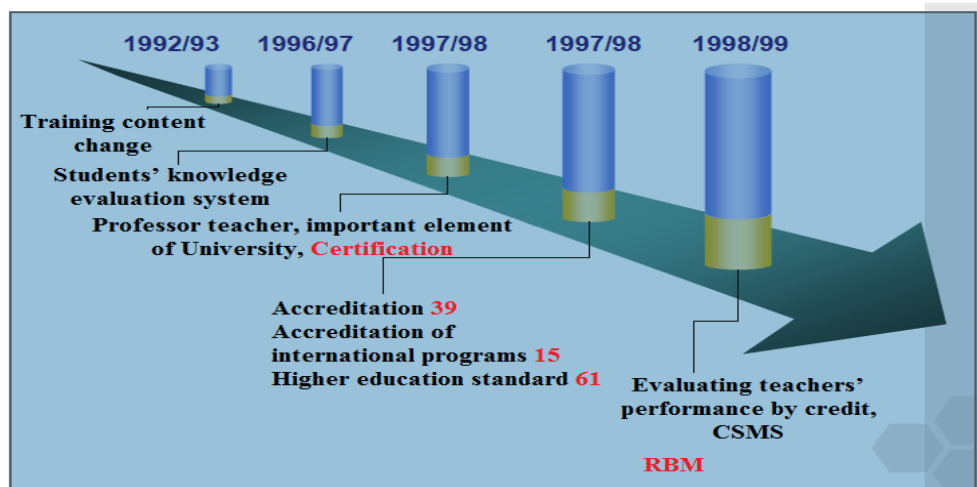
Figure 1. Problems in credit system



Implementation in public HEIs

1. **MUST** started introducing credit based system since academic year of 1992-1993. MUST is the first university to introduce this system in academic activities and it can be deemed that they are rich in credit system experience.

Figure 2. Activities carried out in order to introduce credit system in MUST



Source: Gankhuyag.D, MUST (2015)

MUST introduced “12 scaled system” in students’ knowledge and skills evaluation since academic year of 1996-1997 and it was considered a new development at that time. Also since that time, MUST started employing “Methodology to evaluate teachers’ performance by credit hours” in full scale. Today, the University manages all processes from student enrollment to graduation by training information system (Ganzorig, 2012). As a result of radical structural change and reform started in late 2013, overlapping of degree granting programs was eliminated, close and similar programs were grouped, and the number of bachelor programs was reduced to 53 major programs. Moreover, attempts to determine the appropriate ratio of compulsory and elective subjects in general education subjects group were made and the ratio was set as 80:20. The university is making much effort to transfer and make equivalence of credit hours in the last 2 years. For example, they introduced European Credit Transfer and Accumulation System (ECTS) and issued internal procedures and enforced thereof. Figure 2 shows the timeline of activities carried out by the university within the framework of introducing credit based system in its academic activities.

2. **NUM** started introducing credit based system since 2001. But the transition to the system was slow until 2011. Since 2011, the transition intensified and the reform was completed. NUM specified that “We will fully introduce credit system in academic activities” in its Development Strategic Plan until 2020 (NUM, 2011). It shows that they are giving much emphasis on making their training more flexible and elective for students. Within the framework of this objective, they have made many significant regulations to develop the credit system implementation, especially in bachelor training since 2011. Within the framework of broad structural change made in last 2 years, many changes related to training was made in the university. They have reduced the number of degree granting programs, created program committees and updated study programs in

conformity with Educational classification issued by the UNESCO (2013).

3. As for **MNUE**, they started a few initiatives to introduce credit system since the academic year of 1995-1996. Basically, the transition to this system was relatively slow for MNUE until the academic year of 2013-2014. But as a result of management team restructuring and national education reform, the university has successfully implemented credit system completely in the second semester of the academic year of 2014-2015. Their transition to credit system is based on the best practice of MUST and NUM.

4. **MNUMS** is very prudent on wholly introducing credit system because of its science field and professional attributes though the transition to this system started many years ago. The university has 8 bachelor programs. The first 2 year of the training is for giving basic education of health science and students choose their program/major starting from the 3rd year. They have started program reform with the support of University of Groningen, Netherland in 2000. In other words, MNUMS imported block training program from University of Groningen. A bachelor student have to accumulate about 200 credits in 6 years. As for practice of foreign medical science universities, for example bachelor training of University of Groningen is 3 years and master program is 6 years. Hence, MNUMS has delivered its request to graduate its students with master's degree to MECS but it was not resolved positively. Latterly, the university has developed competence based blueprint, in other words complex of students' acquired knowledge, skills and practice by each of its program for the last 2 years.

5. As for Mongolian State University of Agriculture (**MSUA**), the situation is slightly different from the above mentioned public universities. Internal rules and procedures, academic management, organization and operations of MSUA shows that the credit system implementation in the university is very slow. Although credits are allocated to each course and students are allowed to choose courses, academic management and organization is restricting the flexibility of training to some extent. Generally, the university is still keeping its old and traditional training system. Also MSUA is working on making transition to "cycled or block system" with 4 cycled 2 semesters. In other words, one cycle of training activity lasts for 8 weeks. MSUA imported ULMS training information system from MNUE and working on creating a database.

6. Mongolian State University of Arts and Culture (**MSUAC**) started introducing credit based system in its training since 2010. Also it has initiated program reform at that time and completed in 2014. As a result of initiatives to eliminate program overlapping and meet international standards, the number of its bachelor program was reduced to 26 from 66. The training of the university is very unique and costly compared with other HEIs. As the majority of the courses are taught by 2-3 teachers, estimation of teachers' workload is very complicated. Its bachelor programs have 120-128 credits of contents.

Table 3 shows some indicators of bachelor programs of target public HEIs in comparison. We can see the progress of credit system implementation by each university in its training.

Implementation in private HEIs

Generally, credit system implementation in private HEIs can be considered as insufficient. The practice of Otgontenger University and Ider Institute shows that they have introduced credit system to certain extent. But in fact, students' freedom to choose courses and teachers is limited, and their understanding about training process, related rules and procedures, study program and planning is poor.

The reality is that private universities and institutes are keeping their old system together with the credit system introduced at a very superficial level.

Exerpts from an interview with 25 graduate students of “.....” private institute in May, 2015:

- We do not choose courses or teachers. The school decides the curriculum autonomously.
- We have never seen the study plan.
- The school administration sets the tuition of the academic year and we pay the whole amount in autumn, at the beginning of the academic year.

Basically, a few leading public universities have implemented credit system at a good level but implementation in private universities and institutes is very insufficient.

If we look at the study plan of all HEIs, contents of each course is expressed as credit hours, the number of credits to be accumulated in order to graduate is definite, and compulsory and elective subjects are existent. But the training organization mainly follows traditional class system. There are several problems in this situation.

Firstly, the basic principle of credit system is not abided. The school prepared a common curriculum for all students and takes equal tuition fee of a whole year (payment by half year is also allowed) from all students. Hence, the basic principle in which a student individually plans his/her learning process in conformity with his/her interest, needs, and intellectual, financial and other capacities.

Secondly, the training program, curriculum and teaching plan of HEIs show that they emphasize classroom teaching (contact hours) and gives almost no importance to self-study process of students and its effects. Hence, it can be concluded that the credit system introduced by HEIs cannot be fully based on students' workload.

According to the study conducted by Cheps et al in 2009 covering European HEIs, there are four main approaches to allocate credits to courses. Of course, estimating student workload accurately is very complicated but the average workload can be estimated using example indicators. Mongolian HEIs also estimate student workload by this practice (Three hours of study by student in one week equals to one credit hour. For example, as for lecture course, one hour of lecture and two hours of self-study equals to one credit hour.).

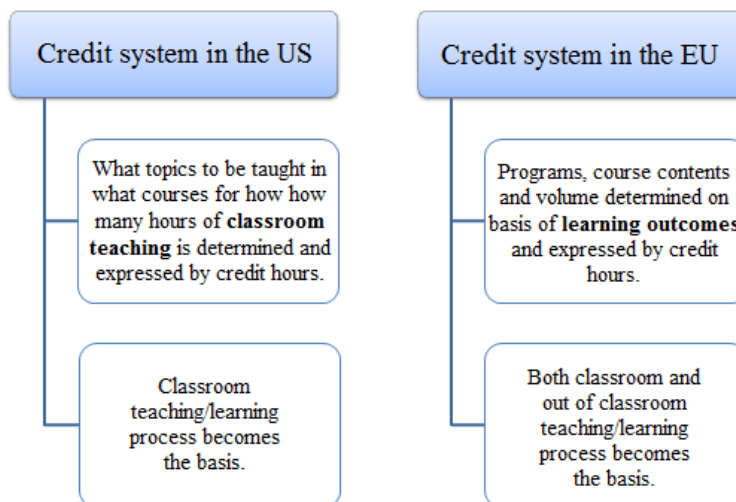
Table 2. Approaches to credit allocation

Approaches to allocate credits to courses	Countries
Credits allocated to courses based on estimation of the average student workload and defined and written learning outcomes.	Denmark, Estonia, Finland, Ireland, Italy, Poland, Sweden (21)
Credits allocated to courses based on estimated average student workload , but without using learning outcomes.	Austria, Belgium-NL, Czech Republic, France, Germany, Latvia, Lithuania, Portugal (45)
Credits allocated to courses based on defined and written learning outcomes , but without an estimation of average student workload.	The Netherlands, the UK (26)
Credits allocated to courses based on teaching / contact hours.	Slovakia, Spain (10)

Source: Cheps et al (2009)

But as mentioned above, it is clearly shown from many things such as students' knowledge and skills evaluation that Mongolian HEIs do not give much importance to the composition of one credit hour, emphasize teaching/contact hours and overlook self-study of students. Hence, it can be concluded that they allocate credit hours to courses solely based on calculating teaching/contact hours (classroom hours).

Some problems are arising from differences in systems



Tsagaach.G

Source: GHK/Technopolis, 2011

Some problems are arising from differences in credit system. Credit system of the USA,

EU and Australia has its own special features and the most spread system is that of the USA and EU. Aside from these, countries of the UK and Northern Ireland have its own special systems.

American credit system is based on classroom teaching. In other words, it determines what topics to be taught in what courses and for how many hours of classroom teaching is needed and expresses thereof in credit hours. As compared to this, EU credit system emphasizes both classroom and out of classroom teaching and allocates credit hours to courses by determining the learning outcomes (GHK/Technopolis, 2011). Mongolian credit system is similar to that of America but it is not that successful until now. It is shown from the above mentioned problems and poor training quality and level of achievements.

There is no National Qualification Framework (NQF) in higher education sector and higher education training is, in many cases, not based on learning outcomes. This situation led to a practice that emphasizes the number of accumulated credits rather than the acquired knowledge, skills and practice when a student is being transferred between institutions. Many universities among HEIs have student exchange contracts with foreign universities and institutes and credit transfer of students to be exchanged is regulated by those contracts. Unfortunately, there is no substantial regulation for credit transfer between local universities and institutes.

Furthermore, there are problems in credit fees or costs as well as training information system. In many cases, fee of one credit hour is determined very roughly. This is one of the issues to be focused on by HEIs. It is interesting that most HEIs have no training information system suited for effective and efficient implementation of credit system as well as no fund to solve this issue.

Thus, there is a need for properly implementing credit system and NQF being developed currently, and creating an entirely new philosophy for higher education sector and HEIs so that new elements such as (1) students' workload and (2) learning outcomes and competence will be included in the study program by reform.

Another issue that has to be considered is that most universities and institutes are performing very poorly as to providing student counselling service that is very important in credit system implementation. Few schools have Student Affairs Office and mobilizing their teachers in providing the student counselling service. Also credit system is used in many countries to evaluate students' academic progress efficiently whereas in our country, the situation is almost contrary to this, in other words, there is no progress evaluation.

In a recommendation issued by the participants of "Credit-Potency-Implementation" consultative meeting held by MECS among administrative officials in charge of training of HEIs in October, 2012, it is stated that "... *Credit system is not widely and fully used in teaching activities and organization of higher education training. Also it should be noted that credit system is not used in supporting self-study activities of students and making transition to student-centered training as a leverage.*" This statement summarized and concluded the above mentioned problems and still does.

On the whole, HEIs tend to give importance to numbers (learning outcome?) rather than quality and to final monitoring rather than process monitoring (continuous tracking and monitoring of students' academic progress?), and in many cases, overlook student counselling service and introduce training information system insufficiently.

There are many factors affecting the current situation. But it is mainly due to the lack of government support, weak regulation, misunderstanding and poor knowledge of credit system, skepticism, and in some cases, it is due to the fact that pedagogy became the way of making a living.

Table 1. Some indicators of bachelor program of public universities

	MUST	NUM	MNUE	MNUMS
Enrollment	By program/major	By school	By program	By program
	Twice a year	Once a year	Once a year	Once a year
	- Depends on GEE points; - No criteria of enrollment for enrollees with education degree equal to or higher than bachelor;	- Depends on GEE points; - Enrollees with education degree equal to or higher than bachelor will take entrance examination;	- Depends on GEE points;	- Depends on GEE points;
Number of semesters	4 (autumn, winter, spring, summer)	3 (autumn, spring, summer)	3 (autumn, spring, winter-summer)	2 (autumn, spring)
Semester duration (weeks)	- Autumn and spring semester: 16 weeks each; - Summer and winter semester: 4 weeks each;	- Autumn and spring semester: 16 weeks each; - Summer semester: 8 weeks;	Autumn and spring semester: 16 weeks each (First week is course selection week and the remaining 15 weeks are learning period); Winter-summer semester: 7+8=15 weeks of learning;	16 weeks each;
Single major study plan	General education (36)+ Core subjects (30)+ Major and minor (54) =120 (minimum), 130 (maximum)	Different in each school, for example as for School of Science: General education (36)+ Core subjects (9)+ Major and minor (60)+ Openly elective (15) =120 (minimum)	General education (18)+ Basis of pedagogic education (42)+ Core subjects (15)+ Major and minor (45) =120 (minimum)	General education of health science += over 200
Amount of credits to study in one semester	Average: 15 Minimum: 12 Maximum: 21	Average: 15 Minimum: 12 Maximum: 21	Average: 15 Minimum: 10 Maximum: 21	
Evaluation	12 scaled system	9 scaled system	12 scaled system	5 scaled system
Study period	3.5-4.5 years	On average: 4 years Maximum: 6 years	3.5-6.5 years	5-6 years
Stop out period	6 semesters at most	4 semesters at most	4 semesters at most	
Opportunity to acquire dual degree	Available	Available	Available	Available
Joint program	Available. Regulated by training procedure.	Available. Regulated by training procedure.	Available. Regulated by training procedure.	Available

Across branch program	Available	Under discussion	NA	NA
Course organization	Based on course and teacher selection by students.	Based on course and teacher selection by students.	Based on course and teacher selection by students.	Based on course selection by students.
Training Information System	UNIMIS	SISI	ULMS	UNIFACE
Special Requirements	<ul style="list-style-type: none"> - Having studied general education and core subjects, GPA requirements have to be met in order to be promoted to the next grade (GPA must be not less than 2.0); - GPA requirements have to be met in order to graduate (GPA must be not less than 2.0); - Graduation examination/graduation assignment must be taken/done; 	<ul style="list-style-type: none"> - GPA requirements have to be met in order to graduate; - Graduation examination/graduation assignment must be taken/done; - GPA requirements have to be met in order to do graduation assignment; 	<ul style="list-style-type: none"> - Graduation examination/graduation assignment must be taken/done; - GPA requirements have to be met in order to do graduation assignment; - 2 credit hours of course for graduation preparation must be studied before graduation; - GPA requirements have to be met in order to graduate (GPA must be not less than 1.7); - Progress examination must be taken for every 30 credits accumulated; 	<ul style="list-style-type: none"> - Graduation examination/graduation assignment must be taken/done; - Overall examination results are taken into consideration in choosing program/major;
Program committee	Available Sub committees + General committee consisting of 5 sub divisions	Available Department committees + Branch school committees + General committee	NA Sub committees of general fields of science + General committee	NA Academic council
Mentor	For each students enrolled	Available	Available	Available

Source: Compiled from training procedures of the above universities (Tsagaach.G, Sudirman Yahya)

Conclusion

The following conclusions arise from the above assessment on current development of credit system implementation:

- In the past, many important steps and initiatives are taken and it is obvious that making transition from long lasting system to a new system, especially introducing a new system in a very broad scale is not easy.
- A few public universities such as MUST, NUM and MNUE have introduced credit system at a relatively good level compared with other HEIs.
- Private universities and institutes have introduced credit system at a very insufficient level and are keeping their old system together with the credit system introduced at a very superficial level.
- HEIs cannot use credit system as a leverage to support students' independent activities and make transition to student-centered teaching.
- On the whole, credit system implementation is insufficient due to the lack of government support, weak regulation, public misunderstanding and poor knowledge, and skepticism.

Appendix 2. Recommendation on revision of exemplar procedure for using credit in higher education degree granting trainings

EXEMPLAR PROCEDURE FOR USING CREDIT IN HIGHER EDUCATION DEGREE GRANTING TRAININGS (RECOMMENDATION)

One. General grounds

1. This exemplar procedure is abided in regulating the relations arising from using credit in higher education degree granting trainings of state-owned and private higher education institutions operating in Mongolia.
2. Academic year of higher education institutions shall consist of two semesters to teach in classrooms in not less than 16 weeks (not more than 18 weeks). Normative period (number of weeks) of a semester along with examination and recess period is defined by each higher education institutions. If it meets training requirements, additional semester training may be conducted during summertime.
3. One hour of course (hereinafter referred to as “hour”) of higher education institutions is 50 minutes and two hours of course may be offered in 90 minutes without a break in between.

Two. Credit

4. Credit is a unit to measure content capacity of education and it is the basic measurement to determine workload of students, teaching work load of teachers and tuition fee. Credit becomes the ground for regulating relations arising from standard requirements on higher education degree granting trainings and planning, financing and organizing academic activities. One credit hour equals to full workload of a full-time student in one week or as for a semester of 16 weeks, it equals to 48 hours.
5. Volume of higher education granting Diploma program content shall be not less than 90 credits and including the credits of previous levels, bachelor program content shall be not less than 120 credits, master program content shall be not less than 150 credits, and doctoral program content shall be not less than 210 credits respectively

Three. Allocating credits to courses

6. Course credits shall be integers to represent the course content and the amount depends on hours and forms to study the course in a week. The following pack of hours to be spent on learning activities by students are considered to be one credit hour:
 - 1 hour of lecture + 2 hours of self-study by students;
 - 2 hours of seminar + 1 hour of self-study by students;

- 3 hours of laboratory learning;
 - 48 hours spent by a student on learning activities such as practical course, clinic training and bachelor research work (diploma thesis) may be matched to one credit hour.
7. Credit hour of a course includes overall time spent by a student to acquire required knowledge, skills and attitudes within the framework of the course, in other words, total teaching/contact hours of the subject, class work and hours spent on self-study activities such as writing abstracts, doing graphic estimations and individual assignments, and hours spent on taking advice from teachers and having acquired knowledge, skills and attitudes evaluated.
 8. Credit hour is not allocated to overall examination covering contents of several courses, graduation examination, competitions and scientific conferences.
 9. Courses with the same index (name) in an institution will have same credit.
 10. Content of a course must be able to be taught in one semester. In case a subject has to be studied in two or more semesters because of high volume of content, the subject is divided into successive subjects and each of them is assigned a name, index and credit hour. At every level of the course, students' acquired knowledge and skills are evaluated.
 11. Students' course activity (attendance and participation etc.) may be considered in the students' knowledge, skills and attitudes evaluation but it does not influence the amount of credits.
 12. Credits allocated to courses must be able to be matched between higher education institutions.

Four. Student workload

13. Standard workload of one semester study (including practical training) of a full time student (which includes day and evening class students) is 15 credits and the minimum workload is 12 credits. The maximum workload is determined and enforced by the HEI in consideration of training quality, accessibility and standard.
14. Workload of one semester study (including practical training) of a half time student (correspondence course or external degree students) is determined and enforced by the HEI in consideration of above standard workload and training quality, accessibility and standard.
15. The grade of a student is determined by the amount of credits they accumulated successfully:

0-30 credits accumulated	1 st grade student
31-60 credits accumulated	2 nd grade student
61-90 credits accumulated	3 rd grade student
91 or more credits accumulated	4 th grade student

Four. Evaluating knowledge, skills and attitudes

16. Evaluation of students' knowledge, skills and attitudes acquired in a course is a complex indicator to show how well students studied the contents in the syllabus during the course and at the end of the course, and whether they have acquired the knowledge, skills and attitudes reflected in the syllabus. Evaluation measurement will be in "percentage points", "grades

represented by letter” and “grades represented by number”. Also “satisfactory” and “unsatisfactory” markings may be used.

17. Percentage points indicate the percentage of students’ performance assuming that the level of knowledge, skills and attitudes to be acquired in classroom and self-study academic activities are 100%. The evaluation consists of formative and summative evaluation and presented in integer.
18. Grades represented by letter indicate students’ performance by A, B, C, D and F letters. These grades can be matched to grades represented by numbers such as 4.0, 3.0, 2.0, 1.0 and 0. Higher Education Institutions may officially increase the evaluation scale in consideration of this standard and enforce thereof.
19. The following criteria are followed in giving grades by letters.
 - A- A grade that represents the highest academic success. Indicates full and proactive acquisition of knowledge, skills and attitudes to be acquired in a course;
 - B- A grade that represents above average academic success. Indicates good acquisition of knowledge, skills and attitudes to be acquired in a course;
 - C- A grade that represents average academic success. Indicates enough acquisition of knowledge, skills and attitudes to be acquired in a course;
 - D- A grade that represents near average academic success. Indicates unbalanced acquisition of knowledge, skills and attitudes to be acquired in a course, being competent to execute relatively easy tasks, and generally, lacking knowledge, skills and attitudes;
 - F- A grade that represents knowledge, skills and attitudes are insufficient.
20. Grades by letters, grades by numbers and percentage points are matched by the following standard.

Grades by letters	Grades by numbers	Percentage points
A	4.0	90-100
B	3.0	80-89
C	2.0	70-79
D	1.0	60-69
F	0	0-59

21. Aside from grades by letters and grades by numbers, additional marks such as I, E, NC, CR, R, W, WF, NA, NR, S and U are used to evaluate students’ knowledge, skills and attitude. These additional marks are used to determine the reason of regression of students’ GPA, monitor students’ academic progress and regression by GPA, grant opportunity to improve grades, and transfer credits from and to other institutions.

I	(Incomplete)
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	Indicates that formative (mid-term) evaluation is incomplete (précis and assignment are incomplete or being absent during mid-term test etc.) due to justifiable excuse and can be completed and evaluated during the examination period.
E	(Examine incomplete by student) This mark is used in case a student was unable to attend the end-term examination due to justifiable excuse.
NC	(No Credit) Indicates that a student studied a subject that is not counted in credit accumulation. In case the student's selection for non-credit subject is approved and the student passed successfully, this mark is filled.
CR	(Credit gRanted) This mark indicates that the credit is granted due to equivalence of a subject that the student had passed in different school. This grade is written as it is in the diploma appendix.
R	(Repeat) If the student requested to repeat a course for specific reason even if he/she successfully passed it, previous grade is replaced by R mark to grant the opportunity to retake the course.
W	(Withdrew) If a student was unable to further study the course or the student considers his/her performance insufficient, the student may request to have this mark put instead of a grade. Procedure of HEI for retaking the course is same as taking it for the first time.
WF	(Withdrew Failing) If a student performed poorly, it's distinct that the grade would be F, or absence on any form of the course (lecture, seminar or laboratory) is over 1/3 of total number of sessions, the teacher shall put this mark before the end-term examination.
NA	(grade Not yet Available) Marks that the course is currently not concluded or the student is still studying.
NR	(No grade Reported) This mark is automatically created by the information system, if the teacher does not give grades to students and upload it in the system before the deadline.
S	(Satisfactory) Indicates that the performance is satisfactory.
U	(Unsatisfactory) Indicates that the performance is unsatisfactory.

22. Main form of evaluation of students' acquired knowledge, skills and attitudes from the syllabus of the study plan is examination. For non-credit subjects, students' acquired knowledge, skills and attitudes may be evaluated by test.
23. Knowledge, skills and attitudes acquired by drawing, computing, laboratory works, practice, bachelor research works and other self-study assignments are evaluated by projects, report submission, mid-term check, colloquium, test, précis or other similar forms.
24. Formative evaluation indicates how students made efforts to acquire the knowledge, skills and practice to be acquired during the course.
25. Summative examination is main indicator of how well students acquired knowledge, skills and attitudes reflected in the syllabus of the course after completing the course.
26. If the student scored 60 or more it's considered that the student successfully obtained the appropriate knowledge, skills and attitudes on the subject and the credits are granted. If the score is less than 60, it's considered that the student's performance was "insufficient" and credits are not granted.
27. A student who scored less than 60 points for his/her acquired knowledge and skills on a compulsory subject must retake the course to acquire the credit of the course.
28. A student who took successful grade (over 60 points) is allowed an opportunity to increase his/her grade, acquired knowledge and skills on the course by retaking the course.
29. In case a student retakes a course on which he/she took more than 60 points, the previous grade is changed to "R" so that the course will be available for retaking.
30. Higher Education Institutions shall resolve by their procedure whether to write the latest grade and credits granted by student on courses or to write the overall grade and credits, and enforce thereof.
31. Test point is 100, same as examinations. If a student's point is 60 or more the result is considered "satisfactory" and if the point is less than 60 the result is "unsatisfactory". Grades are marked as "S" and "U" respectively.
32. A student who did not take end-term examination without a justifiable excuse will get "F" grade or "Insufficient" mark. But if a student did not take end-term examination due to a justifiable excuse, "E" mark is given based on document evidence. Students who were given I or E mark are obligated to take examination within the period set by the HEI.
33. Credits of courses that are given additional mark are not included in the calculation of overall GPA or Average Points.
34. If a student who considers that he/she has sufficient knowledge, skills and practice to be acquired in the course makes a request, an achievement test is given at the beginning of the semester and the student may study the course independently or be excused from the course (consequently, from the summative examination of the course).
35. If credits are allocated to internships of the core and major subjects, the report submission should be considered as an exam and evaluated by points.

36. Students' performance is determined by semester and all-time GPAs and Average Points. Average Points equal to points of each subjects with credits multiplied by respective credits, and the grand total divided by total credit (arithmetic weighted average). The result is rounded by one decimal place. GPA is a combination of numeric and quality evaluation of students' acquired knowledge, skills and attitudes, and calculated by the same method as Average Points.

$$GO = \frac{\sum_{i=1}^n K_i \cdot O_i}{\sum_{i=1}^n K_i} \quad \Gamma D = \frac{\sum_{i=1}^n K_i \cdot D_i}{\sum_{i=1}^n K_i}$$

n - number of subjects

K_i - credit hour of the (i) subject

$O_i (D_i)$ – point (grade) of the (i) subject

$GO (\Gamma D)$ - GPA (Average Points)

37. GPA is divided into the semester GPA and overall GPA.
38. Students should be aware of their semester and all-time GPA and Average Points so they can evaluate their learning progress and plan further.
39. GPA becomes a criterion for determining the students' standard workload, whether a student is allowed to study in double program (which includes both joint program and dual program), be transferred or be enrolled in the next level training, naming students for awards and scholarships, issuing education degree and documents, giving honors, granting diplomas and removing due to learning achievements. It also becomes an indicator of learning outcomes by indicating successfully accumulated credits.
40. In case a higher education institution has an evaluation system that has more than 5 scales, the HEI should transfer the GPA of students who are named to a national award or a national scholarship into 5-scaled evaluation and deliver it to relevant authority.

Five. Transfer of credits

41. Every HEI shall issue a procedure for student transfer and enforce thereof.
42. General requirements for transferring credits accumulated by a transferred student are study period, the number of successfully accumulated credit hours, overall GPA of the study period, and the level of acquired knowledge, skills and attitudes by each subject.

Six. Tuition fee

43. Tuition fee consists of credit fee of courses and other fees. Students pay different tuition fees every semester depending on how many credits they study in the semester.
44. Credit fee of courses may vary course by course as well as by science fields.
45. Higher Education Institutions redetermine the amount of credit fee of courses and other fees every year and the school board shall approve thereof. The determined fees shall not be changed during the academic year.

Seven. Other provisions

46. The Higher Education Institution is obligated to ensure the environment in which a student can select courses every semester in conformity with his/her interest, needs and capacity by introducing training information system and counselling service etc.

Eight. Procedure implementation monitoring and assessment

47. State administrative central authority in charge of education matters and higher education institution shall conduct monitoring and assessment on the implementation of this procedure and inform the academic stakeholders about the results, and employ it for continuous improvement of academic activities.
48. Procedure implementation monitoring and assessment is made on basis of training documents, reports, research papers, surveys of students, teachers, staff, graduates and employers issued by HEIs periodically or nonperiodically, and audit opinion.

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