

### 東北大学文学部学士課程：日本語

東北大学文学部では、ディプロマ・ポリシーで示した目標を学生が達成できるよう、以下の方針に基づき教育課程を編成・実施する。

1. 1年次には全学教育科目における「基盤科目」「先進科目」「言語科目」等の基礎教養を中心に学び、大学における学修の基盤を形成する。同時に専門への導入として「基礎専門科目（入門）」を学ぶ。
2. 2年次以降は26専修のいずれかに所属し、まず2年次に「概論」「基礎演習」「基礎実習」「基礎講読」等の「基礎専門科目」において多様な人間文化に関する基礎的知識を幅広く学習する。
3. 3年次以降には「各論」「演習」「実習」「講読」等の専門教育科目において専門の学問分野を深く学ぶことによって、人文社会科学的方法を理解し身につける。
4. 全学年を通じて全学教育科目および学部専門科目における外国語科目において、国際化する社会に対応できるよう、二つ以上の外国語を習得し実用的な国際的コミュニケーション能力を身につける。
5. 学習成果の評価は、科目の特性に応じ筆記試験、レポート、口頭試験、演習・実習での習熟度等により厳正に行う。
6. 卒業年次には卒業論文あるいは卒業研究の提出を求め、教員の指導のもと、自らの課題を発見し、その解決に取り組むことを可能とする普遍的で創造的な思考能力と表現能力を身につける学習を推進する。
7. 以上の教育課程を通し、人文社会科学的な専門的知識をもつ社会人あるいは大学院生として果たすべき使命を自覚させ、学生の確かな将来展望を築く自律的学習力を育成する。

### 東北大学文学部学士課程：英語

In order to cultivate students who can achieve the goals described in the Policy Concerning Degrees, the Graduate School of Arts and Letters at Tohoku University will formulate and implement curricula based on the following objectives:

1. In the first year, students take basic liberal arts subjects such as "foundational courses," "advanced subjects," and "language courses" from the selection of university-wide classes to form the basis of their university education. At the same time, they also enroll in "Basic Specialization Courses (Introductory)" as an introduction to specialized subjects.
2. From the second year onward, students choose one of the 26 specialties, and begin by obtaining a wide range of basic knowledge on various human cultures in "basic specialization courses" such as "Introduction to the Field," "Foundational Seminar," "Foundational Practicum," and "Foundational Readings" in the second year.
3. From the third year onward, students will develop an understanding of humanities and social science methods through in-depth study of specialized academic fields in dedicated academic courses including "Studies in Specialized Topics," "Academic Training," "Practical Methods," and "Directed Readings".
4. Through foreign language courses offered in university-wide programs and specialized undergraduate courses throughout the academic year, students will acquire two or more

foreign languages and acquire practical international communication skills in order to thrive in international societies.

5. Strict evaluation of learning outcomes is accomplished through written examinations, reports, oral examinations, and proficiency in exercises and practical training in accordance with the requirements of academic courses.
6. In the graduation year, students are required to submit a graduation thesis or graduation research project for which they search out their own topics under the guidance of teaching faculty and solve the questions they pose themselves using the universal creative thinking and expression skills they have obtained from the program's academic training.
7. By means of these educational programs, we will build student consciousness of their mission as members of society and graduate students holding specialized knowledge in the humanities and social sciences and will foster autonomous learning skills to enable a bright and secure future for students.

#### 東北大学教育学部学士課程：日本語

東北大学教育学部は、教育に関する理論的基礎に支えられた専門的知識と技能を備え、現代社会が抱える教育の諸問題を総合的かつ体系的に把握し、その解決を具体的に推進しうる人材の育成を行うために、以下の方針に基づいてカリキュラム（教育課程）を編成している。

- ①人間・社会や自然についての幅広い教養を身につけるために、人文・社会科学ならびに自然科学に関する全学教育科目を配置している。
- ②初年次において、教育に関する諸問題について広く理解をするために、「教育学への招待」「教育学研究入門」等の学部共通科目を設置している。
- ③教育に関する専門的知識と技能を獲得するための「講義」を設置している。
- ④教育の今日的諸問題を把握する力を育成するために、様々な課題を検討する「演習」を設置している。
- ⑤「講義」や「演習」での学びを基礎としつつ、具体的な課題解決を実体験する「実習」として、「教育学実習」「教育情報アセスメント実習」「教育心理学実験Ⅰ、Ⅱ」を設置している。
- ⑥指導教員を中心とした複数の教員による指導の下で、教育に関する課題を自主的に設定し、解決に向けた企画・実践力を育成するために「研究指導」ならびに「卒業研究」を設置している。
- ⑦「講義」「演習」「実習」等専門教育科目に関する学修成果の評価結果をもとに、カリキュラムの不断の見直しを行う。

なお、学修の成果については、各科目のシラバスなどに記載された学修の到達目標および成績評価方法によって総合的に評価している。

#### 東北大学教育学部学士課程：英語

Students who earn a degree with the Faculty of Education of Tohoku University possess expertise and skills grounded in the theoretical foundations of education; and are capable of comprehensively and systematically understanding and successfully confronting the various problems faced by educators in modern society. To that end, the Faculty of Education has organized its curriculum based on policy that provides:

- (1) General education subjects related to humanities, social science, and natural sciences to equip students with a broad understanding of human beings, society, and nature.
- (2) "Common courses for undergraduate" such as "Invitation to Pedagogy" and "Introduction

of Educational Research" to provide students with a wide knowledge of various educational issues in the first year of study.

- (3) "Lectures" that enable students to acquire expertise and skills related to education.
- (4) "Seminars" in which various issues are considered for developing students' ability to grasp the problems faced by today's education.
- (5) Based on learning through "Lectures" and "Seminars," "Practical Training for Educational Research," "Practical Training for Educational Informatics and Innovative Assessment" and "Laboratory Work on Educational Psychology I, II" are set up as "practical training" to experience solving specific challenges.
- (6) With the guidance of multiple faculty members, mainly academic advisors, "Research Direction" and "Graduation Thesis" are set up to foster the ability to take on educational tasks and to develop planning and practical skills for solutions.
- (7) The curriculum will be constantly reviewed based on the evaluation results of learning outcomes related to "Specialized education subjects" such as "lectures" "seminars" and "practice."

Learning outcomes are comprehensively evaluated with the achievement goals and grade evaluation methods described in the syllabus of each course.

#### 東北大学法学部学士課程：日本語

東北大学法学部では、ディプロマ・ポリシーに掲げた教育目的の実現を目指して、以下の方針に基づき教育課程を編成・実施する。

1. 学部開講の授業科目を内容に即して「基礎講義」・「基幹講義」・「展開講義」の Kategorii に分け、段階的に配置することによって法学・政治学の基礎的な内容を無理なく体系的に修得させる。
  - (1) 「基礎講義」とは、1・2年次生を対象に、法や政治の歴史的・思想的・社会的背景を学ぶことを目的とするもので、全学教育と連携しながら幅広い教養と視野を備えた人間の養成を図るものである。
  - (2) 「基幹科目」とは、1年次後半から2・3年次にかけて、「基礎講義」の履修を前提として、法学・政治学の根幹をなす主要科目の修得を図るものである。
  - (3) 「展開講義」とは、3・4年次において、法学・政治学について、より深い理解とさらに豊かな知見との修得を図るものである。
2. 段階的に配置された講義科目と併行して、1年次から4年次までの学部4年間全般にわたって、「基礎」・「基幹」・「展開」の各講義をフォローアップするため、少人数で開かれる「演習」を多数開講する。
3. 成績評価は、講義の場合は定期試験を中心に小テスト・受講態度・課題への取り組み等を総合して評価し、演習の場合は出席、発言の回数や質、課題への取り組み等を総合して評価する方法を原則とする。

#### 東北大学法学部学士課程：英語

In order to realize the educational goals listed in the Diploma Policy of Tohoku University's School of Law, the School of Law undertakes to draw up and implement a curriculum based on the following objectives.

1. Undergraduate courses are categorized as either 'Basic Lectures', 'Core Lectures' or 'Advanced Lectures' based on their content. This stage-by-stage arrangement of courses will allow students to systematically acquire basic knowledge on legal and political science in a non-taxing manner.

- (1) 'Basic Lectures' are aimed at 1st and 2nd year students. In these courses students learn about the historical, ideological and social background of law and politics. 'Basic Lectures' are closely linked with General Education subjects and aim to foster the growth of citizens with a broad range of knowledge and a broad view of the world.
  - (2) 'Core Lectures' are aimed at 1st year students (to be taken during the second semester of the 1st year of study), and 2nd and 3rd year students. Students are expected to take 'Core Lectures' upon completion of 'Basic Lectures'. Through 'Core Lectures', students will master the essential core topics in legal and political science.
  - (3) 'Advanced Lectures' are aimed at 3rd and 4th year students. The aim of these courses is to acquire a deeper understanding and richer knowledge of legal and political science.
2. Side by side with the lectures outlined above, the School of Law offers a large array of 'Seminars' to 1st-4th year students during the whole course of their studies there. 'Seminars' are courses where participation is limited to a small number of students, and which constitute a follow-up to 'Basic Lectures', 'Core Lectures' and 'Advanced Lectures'.
  3. As a general rule, grading is carried out in the following manner: in the case of lectures, grading is based on a comprehensive evaluation of the final exam (the result of which will be central to the determination of the final grade), smaller tests over the course of the semester, class participation, completion of any assigned tasks, etc.; in the case of seminars, grading is based on a comprehensive evaluation of class attendance, the quantity and quality of their participation in class, completion of assigned tasks, etc.

#### 東北大学経済学部学士課程：日本語

東北大学経済学部は、経済学と経営学の融合教育、少人数の演習ならびに大学院との連携教育を通じて、経済に関する幅広くかつ深い専門知識、課題探求力および国際的視野を備えた指導的人材を育成することを目的とする。この教育理念を実現するために、次のような方針に従ってカリキュラムを編成する。

- ① 1年次と2年次には、経済学および経営学に関する基本的知識を習得するための科目を配当する。
- ② 3年次以降には、経済学および経営学に関するより専門的・応用的知識を習得するための科目を配当する。さらに、大学院開講科目を一部履修可能とすることで、大学院教育との連携を図る。
- ③ 課題探究力を培うため、3年次と4年次に演習科目（ゼミナール）を設ける。少人数教育を重視する観点から、演習科目は必修とする。さらに、4年次の演習科目では演習論文の作成を求める。
- ④ 経済学と経営学の融合教育を目指す観点から、両分野の基礎的な科目を遍く履修することを求め、所属学科によらず卒業必要単位として認定する。
- ⑤ 指導力を養うため、少人数教育、大学院との連携教育、インターンシップなどを活用する。
- ⑥ 視野を国際的に広げるため、海外留学制度を整備し、留学先で履修した科目についても単位認定を行う。
- ⑦ 学修の成果については、各科目のシラバスなどに記載された学修の到達目標および成績評価方法によって総合的に評価する。

#### 東北大学経済学部学士課程：英語

The Tohoku University Faculty of Economics aims to develop leading human resources who have a broad and deep specialized knowledge of economy, an ability to explore problems, and an international perspective through an integrated education of economics and management, small-group seminars, and cooperative education with the Graduate School. To realize that

educational philosophy, the Faculty designs the curriculum in line with the following policies.

- (1) To arrange subjects to learn fundamental knowledge of economics and management in the first year and the second year.
- (2) To arrange subjects to learn more specialized and applied knowledge of economics and management in the third year and thereafter. Furthermore, to cooperate with graduate education by enabling students to take part in the subjects offered at the Graduate School.
- (3) To have seminar subjects (seminars) in the third year and the fourth year to cultivate an ability to explore problems. From the perspective of valuing small-class education, seminar subjects are to be compulsory. Furthermore, students are required to compose papers in seminar subjects in their fourth year.
- (4) From the standpoint of aiming at integrated education of economics and management, to require students to study basic subjects extensively in both fields and recognize them as the credits required for graduation irrespective of the departments to which students belong.
- (5) To make use of small-class education, cooperative education with the Graduate School, and internships to cultivate leadership qualities.
- (6) To develop a study-abroad program and give academic credit for subjects completed as international students to broaden students' horizons internationally.
- (7) Student achievements will be determined by a comprehensive evaluation according to the learning objectives attained and assessment methods as described in the syllabus of each subject.

## 東北大学理学部学士課程：日本語

### 1. 教育課程編成の方針

東北大学理学部では、数学、物理学、宇宙地球物理学、化学、地圏環境科学、地球惑星物質科学、生物学の理学各分野における基礎的で普遍的な知識を体系的に修得した者に学士の学位を授与する。(詳細はディプロマ・ポリシー参照。)

この観点から理学部の教育課程は理学各分野の基礎から学び始め、次第に先端的内容へと展開していく「積み上げ型」のカリキュラムを編成する。また、学生が「積み上げ型」のカリキュラムを着実に理解していくことができるように、そして学生同士の主体的・共同的な学修を促進するために、TA (Teaching Assistant) 等を活用した授業外での学習支援体制を構築し、きめ細かい指導を実施する。

教育課程の編成や運営にあたっては授業評価アンケート等を実施して教育課程の改善を継続的に実施していく。

### 2. 教育方法・内容

・学部1年・2年前期では、理学を含めた様々な学問を幅広く学び、学生が理学の学術的特徴や社会的位置づけについて多角的に理解できるようにする。

・学部2年後期からは、理学に関する専門教育を本格的に展開し、より高度な内容の講義や能動的に理学を学ぶための演習や実習、実験の機会を学生に提供する。また、学部3年後半または4年から研究室教育をスタートさせ、研究指導やキャリア形成支援を行う。

・理学を学ぶために必要となる語学力や国際経験については、授業および多様な留学プログラムを通してその学修を支援する。

・全ての段階において、学生には授業への参加のみならず、授業の予習復習を含めた自律的学修を積極的に行うよう指導する。

### 3. 学修成果の評価

・理学の基礎的かつ普遍的な知識の修得度を評価する。

・成績評価の基準及び方法を明示し、客観的に評価する。また、評価結果を学生にフィードバック

し、理学に関する確かな学力の形成を促す。

・成績評価の基準および方法はそれぞれの授業の目的や内容に即して設定し、シラバスやオリエンテーションの形で学生に適切に周知する。

### 東北大学理学部学士課程：英語

#### 1. Policy on Curriculum Formation

A bachelor's degree from the Faculty of Science, Tohoku University is awarded to those who have systematically acquired basic and universal knowledge in the fields of mathematics, physics, astrophysics, chemistry, geoenvironmental science, earth and planetary materials science, and biology. (See Diploma Policy for details)

From this perspective, the curriculum of the Faculty of Science begins with the basics of each field of science and gradually develops into cutting-edge content and is organized in a "stack-up" manner. In addition, to enable students to steadily understand the "stacked-up" curriculum and to promote independent and collaborative learning among students, we have built a learning support system outside of the classroom using Teaching Assistants (TAs) and provide detailed guidance.

In organizing and operating the curriculum, we continuously improve the curriculum by conducting class evaluations through questionnaires, etc.

#### 2. Methods and Contents of Education

・In the spring semester of the first and second year of the undergraduate program, students learn a wide range of various academic fields, including science, so that they can understand the academic characteristics and social position of science from various angles.

・From the second semester of the second year of the undergraduate program, specialized education on science will be developed in earnest, and more advanced lectures and opportunities for exercises, practical training, and experiments to actively learn science will be provided to students. In addition, laboratory education begins in the second half of the third or fourth year of the undergraduate program, and research guidance and career formation support are provided.

・Support the language skills and international experience required to study science through classes and various study abroad programs.

・At all stages, students are instructed not only to participate in classes, but also to actively engage in autonomous learning, including preparation and review of classes.

#### 3. Evaluation of learning outcomes

・Assess the degree of mastery of basic and universal knowledge of science.

・Clarify the criteria and methods of grading and evaluate objectively. In addition, the evaluation results are fed back to students to encourage the formation of solid academic abilities related to science.

・Grading standards and methods should be set in line with the purpose and content of each class and appropriately communicated to students in the form of syllabi and orientation.

### 東北大学医学部医学科学士課程：日本語

医学部医学科では、ディプロマ・ポリシーで示した目標を学生が達成できるよう、以下の方針に基づき教育課程を編成・実施する。

<教育課程編成方針>

① 1、2年次は全学教育科目として幅広い一般教養科目と専門教育に活用可能な科目を提供する。1年次より専門教育科目を開始し、医療人、医学研究者として必要な基本的知識・技能・

態度を6年間で段階的に修得させる。

②研究第一の理念に則り、長期に亘り研究に従事し成果を発表する期間を設ける。医学研究PBL、基礎医学修練、高次臨床修練によって、医療リーダーや医学研究者として必要な能動学習・自己研鑽の技能と態度の涵養をはかる。

③学習成果の適正な評価と個別フィードバックを行い、学習者の内省・自己啓発と能力開発を促進する。

#### <学修方法・学修過程>

以下のとおりカリキュラムを編成し、実施します。

全学教育科目では、幅広い教養を身につけるとともに、専門教育の基礎となる科目も履修します。

特に「生命科学」の講義では、必修科目として医師として必要な人体の生物学を学びます。

専門教育科目では、「医学・医療入門／行動科学」「基礎医学／社会医学」「臨床医学」「臨床実習」を順番にすべて履修することが卒業の要件です。

#### 1. 医学・医療入門／行動科学

1年次の専門教育科目として「医学・医療入門／行動科学」があります。これは複数のテーマからなるグループ学習・実習・講義で、1年間続きます。少人数ワークショップ、早期医療体験実習、医療コミュニケーション実習、地域医療を担っている医師の講演など、様々な内容を学びます。

#### 2. 基礎医学／社会医学

1年次後半から3年次前半までの2年間学びます。ここでは、人体の正常な構造と機能を学ぶ科目（解剖学・生理学序説、肉眼解剖学、脳解剖学、組織学、生理学、医化学）と、病気の発症・進展のメカニズムおよび治療の基本原則を学ぶ科目（微生物学、免疫学、遺伝学、病理学、放射線基礎医学、薬理学）を開講します。さらに、集団、環境、制度、予防の観点から健康や病気を学ぶ（衛生学、公衆衛生学、法医学、医の倫理学・社会学）科目と、医学を学ぶ基礎となる科目（医学専門英語）も開講します。

また、3年次に20週間行う「基礎医学修練」では、研究室で実際の研究の方法や考え方を学び、基礎医学研究者や研究医となるための素養を磨く機会を提供します。

さらに、3年次終了後あるいは4年次終了後からは、将来の基礎医学研究者や研究医を目指す学生のために「MD-MC-PhDコース」「MD-PhDコース」も用意しています。

#### 3. 臨床医学

3年次後半から4年次後半までの1年間学びます。ここでは、様々な疾病を多面的に把握しつつ、患者さんをひとりの人間として理解し、診察や検査、診断、治療の基本を学びながら、内科学、外科学、専門医学などの臨床医学の基本を学ぶカリキュラムを編成し、実施します。

4年次後半に、それまでに学んだ知識や技能を評価する全国共通の共用試験を実施します。「臨床実習」に進むには、これに合格しなければなりません。

#### 4. 臨床実習

2年間以上の長期間にわたり、臨床実習および関連する学習や試験等を実施します。4年次後半から5年次後半までは、全ての診療科を少人数グループで回り、臨床の現場で医療スタッフとともに診療の一部に参加しながら、実際の診療の基礎を学ぶ実習（臨床修練）です。診療科によっては、地域の病院への派遣も行われます。

続く5年次後半からの6ヶ月間は、各学生が興味や進路志望をもとに選択した診療科や分野で4週間ずつ学ぶ実習（高次臨床修練）です。この期間等を利用して海外で実習する機会も用意しています。

6年次後半に卒前最終講義を開講し、基礎系・社会医学系・臨床系分野の教授から、それぞれ専門領域の学問の理念・将来の展望について聴きます。6年次の2月には医師国家試験があります。

#### <学修成果の評価方法>

学修成果の評価について、定期試験、レポート、授業中の小テストや発表などの平常点で評価し

ます。各科目の評価方法については、授業内容とともにシラバスに明示されています。

また、4年次後半には、それまでに身に付けた知識と技能を医療系大学間共用試験（CBT、OSCE）において検証します。6年次後半には、卒業までの6年間で身に付けた知識と技能を卒業試験（筆記、OSCE）において検証します。

### 東北大学医学部医学科学士課程：英語

Tohoku University School of Medicine structures and implements its educational curricula as follows, to ensure that students meet the goals described in the Diploma Policy:

#### <Curriculum Design Policy>

- i) Offer curricula of general education subjects and specialized education subjects for medical sciences during the first two years.
- ii) Offer curricula of basic knowledge, skills and attitudes that are necessary to become a practitioner and a researcher of medicine in a step-by-step manner throughout the six-year education.
- iii) Provide a long-term course following the principle of “research first”, in which students work exclusively on basic medical research and have an opportunity to present their data in academic meetings.
- iv) Cultivate students’ abilities of active learning and self-development which will be vital to be a leader of clinical and research teams through such courses as problem-based learning (PBL) course, long-term research course and advanced elective course.
- v) Conduct appropriate evaluation of learning outcomes and provide individualized feedback for each student to help them generate self-reflection and develop competence.

#### <Learning methods/processes>

The curriculum will be organized and implemented as follows:

In general education subjects, students acquire a wide range of knowledge and also take subjects that provide the basis for learning medical sciences in the specialized education courses. In particular, in the "Biology" lectures, students learn the biology of the human body as a compulsory subject to become a doctor of medicine.

In the specialized education courses, the completion of all of the following subjects in order is required for graduation: Early Clinical Exposure / Behavioral Science, Basic Medicine / Social Medicine, Clinical Medicine, and Clinical Clerkship.

#### 1. Early Clinical Exposure / Behavioral Science

“Early Clinical Exposure / Behavioral Science” is offered as a specialized education subject in the first year. This is a group study, practical training, and lecture consisting of multiple topics, and lasts for one year. The course includes small-group workshops, early medical experience training, medical communication training, and lectures by doctors who are responsible for community medicine.

#### 2. Basic Medicine / Social Medicine

Students study basic medicine and social medicine for two years, from the second half of their first year to the first half of their third year. Here, we offer subjects to study the normal structure and function of the human body (Introduction to Anatomy and Physiology, Gross Anatomy of the Human Body, Neuroanatomy, Histology, Physiology, Biochemistry), and subjects to study the mechanisms of disease onset and progression and the basic principles of treatment (Microbiology, Immunology, Genetics, Pathology, Radiation Biology, Pharmacology). In addition, subjects in health and disease from the perspectives of population, environment, institutions, and prevention (Environmental Health, Public Health, Forensic Medicine, Medical Ethics/Sociology) and subjects that provide the basis for studying medicine (Medical English) will be offered.



The 20-week "Advanced Course for Basic and Social Medical Sciences" course in the third year provides students with the opportunity to learn about actual research methods and concepts in a laboratory and to enhance their skills to become basic medical researchers and physician scientists.

Moreover, from the end of the third or fourth year, we offer "MD-MC-PhD Course" and "MD-PhD Course" for students who will pursue research as their career in basic and clinical medicine.

### 3. Clinical Medicine

Students study clinical medicine for one year from the second half of their third year to the second half of their fourth year. Here, students learn the basics of clinical medicine, including internal medicine, surgery, and other medical specialties, while learning the basics of physical examination, testing, diagnosis, and treatment, to understand patients with various diseases with a multifaceted and holistic approach.

In the second half of the fourth year, students are supposed to take the Common Achievement Tests which evaluate the medical knowledge and skills they have acquired up to that point. Students must pass these exams in order to proceed to clinical clerkship.

### 4. Clinical Clerkship

Clinical clerkship and related studies and examinations are provided over a period of two years or more.

From the second half of the fourth year to the second half of the fifth year, students visit all clinical departments of Tohoku University Hospital in small groups and learn the basics of actual medical treatment, which is called "Clinical Clerkship". They participate in the medical practice together with the medical team at the clinical site. Students may also have a chance to work in local hospitals.

In the second half of the fifth year, students spend six months in a four-week internship (Clinical Elective) in the specialties of their choice based on their interests and career aspirations. We also provide opportunities for students to practice overseas during this period.

In the second half of the sixth year, professors of basic, social, and clinical medicine give lectures to students in light of the current problems and future perspective of their field of expertise as the valedictory address to graduating students. In February of the final year, students take the national licensure exam for medical practitioners.

#### <Methods for evaluating learning outcomes>

Evaluation of learning outcomes will be based on regular examinations, reports, short paper tests and oral presentations in class. The evaluation methods for each subject are stated in the syllabus along with the subject contents.

In the second half of the fourth year, students' knowledge and skills acquired up to that point will be assessed through the Common Achievement Tests for medical students, that are comprised of a computer-based test (CBT) and an objective-structured clinical examination (OSCE). In the second half of the sixth year, the knowledge and skills acquired over the six years until graduation are verified in the graduation examinations with a written test and an OSCE.

## 東北大学医学部保健学科学士課程：日本語

医学部保健学科は、ディプロマ・ポリシーで示した目標を学生が達成できるよう、以下の方針に基づき教育課程を編成・実施する。

#### <教育課程編成方針>

- ①幅広い教養を修得するための全学教育科目を学ぶとともに、専攻の専門の基礎となる科目による動機づけ、専門の知識や技術の習得、臨地実習を通じた応用力の向上をはかる。
- ②ライフサイエンス、ヒューマンサイエンスを探究する姿勢を尊重し、授業・実習、特に卒業研

究によって研究マインドを涵養し、看護学、放射線技術科学、検査技術科学の実践力を備えた医療専門職業人・医療現場のリーダーとして活躍する能力を育成する。

③学習成果の適正な評価と個別フィードバックを行い、学習者の内省・自己啓発と能力開発を促進する。

#### <学修方法・学修過程>

以下のとおりカリキュラムを編成し、実施します。

全学教育科目では、幅広い教養と豊かな人間性、優れた倫理観、柔軟な思考力を身につけるとともに、専門教育の基礎となる科目も履修します。

専門教育科目では、医療を担うにふさわしい人間性と高度医療を支える医学知識と技術を身につけることを目的として、それぞれの専攻において、次のとおり教育課程を編成しています。

#### 『看護学専攻』

##### ○1年次

1年次では生命の尊厳を理解し、対象の人権擁護の基盤としての看護の哲学と倫理観を身につけます。

生命倫理学や医療解剖学等の人間を理解する科目を開講します。

##### ○2年次

2年次では看護学の基礎を学びます。

看護学の基本となる科目や看護技術、健康の支援に関する科目を開講します。

また、対象の特性に合わせて身体・心理・社会的ニーズを判断し支援するうえでの必要な知識・技術・態度を身につけるため、専門領域ごとの臨床看護学に関する科目を開講します。

さらに、科学としての看護学を探究する姿勢を身につけるため、看護研究に関する科目を開講します。

##### ○3年次

3年次では看護学の知識と技術の基盤を作ります。

ここでは、臨地実習を実施します。臨地実習では、2年次に学んだ知識を基に実践を行うことで、社会の変動に伴うヘルスニーズを見極め、対象や療養場所、地域の特性に応じた看護の役割を理解し、社会的使命感を持って質の高い看護を提供できる能力を身につけるカリキュラムを編成し、実施します。

また、助産師を目指す学生のために、助産に関する科目を用意しています。

##### ○4年次

4年次では看護学の実践力を備えた医療専門職業人・医療現場のリーダーとして活躍できる能力を身につけます。

高度化、複雑化する医療技術に的確に対処しうる科学的かつ深い専門知識を得ながら、科学的根拠に基づく看護を実践し、他の保健・医療等の専門職と協働してチーム医療・チームケアの一員として参加する能力を身につけるため、チーム医療や総合看護学実習等の総合科目を開講します。

また、卒業研究を実施し、自己の課題とともに看護学の課題を探究するための研究能力と研究マインドの向上を図ります。

4年間を通して創造性・発信力・自主性を備えた優れた学生を育成するために、看護師・助産師になるために必要な科目だけでなく、英語教育、研究教育、キャリア教育等にも力を入れています。

#### 『放射線技術科学専攻』

##### ○1年次

1年次では医療・医学の現場で活躍するための土台を構築します。

人体の構造と機能に関する科目と健康と福祉・疾病と医療に関する科目を開講します。

## ○2年次

2年次では、放射線技術科学の基礎知識と能力を身につけます。

病理学や総合医用画像解剖学等の医学系講義科目、放射線物理学や放射線生物学等の理学系講義・実験科目、医用電子工学や画像工学等の工学系講義・学内実習を開講します。

## ○3年次

3年次では、放射線技術科学に関する幅広い専門知識とその実践を学びます。

2年次に引き続き医学・理学・工学に関する科目を開講するとともに、放射線技術科学の専門知識を深めるため、画像診断学や画像撮影技術学等の撮影撮像技術学に関する科目や放射線治療技術学や放射線腫瘍学等の放射線治療技術学に関する科目、医療安全管理学や診療放射線技師関係法規等を開講します。

また、後期からは臨地実習を実施します。臨地実習では、学内講義や学内実習等で身につけた知識と能力を実際の医療の現場でどのように適用し応用すべきかを学ぶ機会を提供し、実践を通じて医療従事者としての高い倫理観を身につけ、社会的使命感、自己管理能力の向上を図ります。

## ○4年次

4年次では、放射線技術科学の実践力を備えた医療専門職業人・医療現場のリーダーとして活躍する能力を身につけます。

3年次に引き続き臨地実習を実施するとともに、卒業研究を実施します。卒業研究では、高度化する放射線技術科学分野の課題に取り組むことにより、課題解決に必要な情報を収集し、分析・判断・解決できる学問的・臨床的な探究能力と研究マインドの向上を図ります。

また、他の保健・医療等の専門職と協働しながら、高度化、複雑化する医療現場に的確に対処しうる知識と能力を身につけるため、チーム医療と総合医療演習を開講します。

## 『検査技術科学専攻』

### ○1年次

1年次では医療・医学の現場で活躍するための土台を構築します。

医療解剖学や医療概論等の医学に関する基礎知識を学ぶ科目を開講します。

### ○2年次

2年次では検査技術科学の基礎を学びます。

1年次に引き続き医学に関する基礎知識を学ぶ科目を開講するとともに、各検査に必要な知識と能力を身につけるため、血液検査学、病理検査学、一般検査学、生化学検査学、免疫検査学、染色体検査学、輸血・移植検査学、生理検査学に関する講義科目や学内実習科目を開講します。

### ○3年次

3年次では検査技術科学に関する幅広い専門知識とその実践を学びます。

2年次に引き続き、各検査学に関する講義科目や学内実習科目等を開講するとともに、臨床検査技師の役割や使命、臨床検査部門の業務等と各種管理に関する知識や医療倫理・医療安全や患者急変の対応等の知識を身につけるため、臨床検査総合管理学や医療安全管理学に関する講義科目や学内実習を開講します。

また、後期からは臨地実習を実施します。臨地実習では、講義や学内実習等で身につけた知識と能力を実際の医療の現場でどのように適用し応用すべきかを学ぶ機会を提供し、実践を通じて医療従事者としての高い倫理観を身につけ、社会的使命感、自己管理能力の向上を図ります。

### ○4年次

4年次では、検査技術科学の実践力を備えた医療専門職業人・医療現場のリーダーとして活躍する能力を身につけます。

3年次に引き続き検査技術科学に関する幅広い専門知識とその実践を学ぶとともに、卒業研究を実施します。卒業研究では、高度化する検査技術科学分野の課題に取り組むことにより、課題解決に必要な情報を収集し、分析・判断・解決できる学問的・臨床的な探究能力と研究マインドの向上を図ります。

また、他の保健・医療等の専門職と協働しながら、高度化、複雑化する医療現場に的確に対処しうる知識と能力を身につけるため、チーム医療と総合医療演習を開講します。

#### <学修成果の評価方法>

学修成果の評価について、定期試験、レポート、授業中の小テストや発表などの平常点で評価します。各科目の評価方法については、授業内容とともにシラバスに明記されています。

### 東北大学医学部保健学科学士課程：英語

The School of Health Sciences organizes and practices a curriculum under the policy as stated below in order to have students accomplish the objects declared in the diploma policy:

#### <Curriculum Design Policy>

1. Curriculum offers general education subjects in order that students acquire wide-ranging knowledge, and motivates students to study fundamental subjects to form the basis of specialized subjects of each course. In addition, it seeks to improve students' expertise and applied skills through clinical practicum.
2. Curriculum respects the attitudes to explore the field of Life Science and Human Science, and cultivates the students' mind of research through the lectures, practicum and graduation thesis. Ultimately, it aims to foster the human resources who can be professional medical leaders with the abilities of practice in the field of nursing, radiological technology and medical laboratory science.
3. Curriculum promote students' self-reflection, self-development and skill improvement by proper evaluation of learning outcome and individualized feedback.

#### <Learning method/process>

The curriculum will be organized and implemented as follows.

In the general education subjects, students acquire a broad education, rich humanity, a good sense of ethics, and the ability to think flexibly, and also take subjects that provide the basis for specialized education.

In the specialized education subjects, each major organizes the following curricula with the aim of acquiring humanity suitable for medical care and medical knowledge and skills to support advanced medical care.

#### [Course of Nursing]

##### 1st year

In the first year, students acquire an understanding of the dignity of life and the philosophy and ethics of nursing as a foundation for the protection of the human rights of the subject. Subjects in bioethics, medical anatomy, and other subjects for understanding human beings are offered.

##### 2nd year

In the second year, students learn the basics of nursing.

Subjects related to basic nursing, nursing skills, and health support are offered.

In order to acquire the necessary knowledge, skills, and attitudes to determine and support physical, psychological, and social needs according to the characteristics of the subject, subjects related to clinical nursing in each specialized area are offered.

In addition, subjects related to nursing research are offered in order for students to acquire the attitude to explore nursing as a science.

### 3rd year

In the third year, students build a foundation of knowledge and skills in nursing.

During this period, a clinical practicum will be provided. It is designed and implemented to enable students to identify health needs associated with changes in society, to understand the role of nursing according to the characteristics of the target, the place of treatment, and the community, and to acquire the ability to provide high-quality nursing care with a sense of social mission by practicing based on the knowledge learned in the second year.

In addition, for students who wish to become midwives, we offer subjects on midwifery.

### 4th year

In the fourth year, students acquire the ability to play an active role as medical professionals and leaders in the medical field with practical nursing skills.

In order to acquire the ability to practice nursing based on scientific evidence and to participate as a member of team medicine and team care in cooperation with other health and medical professionals, while acquiring scientific and in-depth specialized knowledge that can accurately cope with increasingly advanced and complex medical technology, comprehensive subjects such as team medicine and comprehensive nursing practice are offered.

Students will also conduct graduation research to improve their research skills and research mindset to explore issues in nursing as well as their own issues.

In order to nurture outstanding students with creativity, communication skills, and independence throughout their four years of study, we focus not only on the subjects necessary to become nurses and midwives, but also on English education, research education, and career education.

## [Course of Radiological Technology]

### 1st Year

In the first year, students build a foundation for working in the field of medicine and medical science.

Subjects on the structure and function of the human body and subjects on health and welfare, disease and medicine are offered.

### 2nd year

In the second year, students acquire basic knowledge and skills in radiological technology science.

Lecture courses in medicine such as pathology and comprehensive medical imaging anatomy, lectures and experiments in science such as radiation physics and radiation biology, and lectures and on-campus training in engineerings such as medical electronics and imaging engineering are offered.

### 3rd year

In the third year, students learn a wide range of specialized knowledge about radiological technology science and its practice.

Subjects related to medical science, science, and engineering are offered continuously from the second year, and subjects related to diagnostic imaging and imaging technology, subjects related to radiation therapy technology and radiation oncology, subjects related to medical

safety management, and laws and regulations related to radiological technologists are also offered to deepen students' specialized knowledge in radiological technology.

The clinical practicum begins in the second semester.

It allows students to learn how to apply and apply the knowledge and abilities acquired through on-campus lectures and practical training in actual medical situations, to acquire a high sense of ethics as a medical professional through practice, and to improve their sense of social mission and self-management skills.

#### 4th year

In the fourth year, students acquire the ability to work as medical professionals and leaders in the medical field with practical skills in radiological technology.

Continuing from the third year, students conduct clinical practicum as well as graduation research. In the graduation research, students work on issues in the increasingly sophisticated field of radiological technology to improve their academic and clinical inquiry skills and research mindset to collect, analyze, judge, and solve information necessary to solve issues.

In order to acquire the knowledge and ability to cope with the increasingly sophisticated and complex medical field in collaboration with other health and medical professionals, we also offer seminars on team medicine and comprehensive medicine.

#### [Course of Medical laboratory science]

##### 1st year

In the first year, students build a foundation for working in the field of medicine and medical science.

Subjects to learn basic knowledge about medicine such as medical anatomy and introduction to medicine are offered.

##### 2nd year

In the second year, students learn the basics of medical laboratory science.

Continuing from the first year, in addition to subjects that provide basic medical knowledge, lecture subjects and on-campus practical training subjects in hematology, pathology, general laboratory science, biochemistry, immunology, chromosome testing, blood transfusion and transplantation testing, and physiology are offered to acquire the knowledge and skills necessary for each laboratory testing.

##### 3rd year

In the third year, students learn a wide range of specialized knowledge about medical laboratory science and its practical application.

Continuing from the second year, lecture subjects and on-campus practical training subjects related to each laboratory science are offered. In addition, lecture subjects and on-campus practical training subjects related to clinical laboratory integrated management and medical safety management are offered in order to acquire knowledge of the role and mission of a clinical laboratory technologist and scientist, the work of the medical laboratory section, and various types of management, as well as knowledge of medical ethics, medical safety, and handling of sudden patient changes.

The clinical practicum begins in the second semester. It provides students with the opportunity to learn how to apply the knowledge and skills acquired in lectures and on-campus training to actual medical situations, and to acquire a high sense of ethics as a medical

professional through practice, and to improve their sense of social mission and self-management skills.

4th year

In the fourth year, students acquire the ability to play an active role as medical professionals and leaders in the medical field with practical skills in medical laboratory science.

Continuing from the third year, students will learn a wide range of specialized knowledge and practices related to medical laboratory science, as well as carry out graduation research. By tackling issues in the increasingly sophisticated field of medical laboratory science, the graduate research program aims to improve students' academic and clinical inquiry skills and research mindset to collect, analyze, judge, and solve information necessary for problem solving.

In order to acquire the knowledge and ability to cope with the increasingly sophisticated and complex medical field in collaboration with other health and medical professionals, we also offer seminars on team medicine and comprehensive medicine.

<Methods for evaluating learning outcomes>

Evaluation of learning outcomes will be based on regular examinations, reports, quizzes and presentations in class. The evaluation method for each course is clearly stated in the syllabus along with the course content.

#### 東北大学歯学部学士課程：日本語

歯学部は、豊かな教養と人間性、高い倫理観と問題解決能力を備えた歯科医師、教育研究者を育成することを目標とし、以下の方針に基づき、カリキュラムを編成・実施する。

- (1) 入学直後の1年次には、歯学を勉学する意欲の動機付け (early motivation) と歯科医療現場の早期体験 (early exposure) を支援する。
- (2) 1、2年次で学ぶ全学教育科目では、豊かな教養と人間性に裏付けられた知的探究を行う能力を涵養し、さらに、2年次以降に学ぶ専門教育科目との有機的な連携を重視する。
- (3) 2年次以降で学ぶ専門教育科目では、分子から個体レベルまでの様々な階層における人体の構造・機能と疾患および生体材料、共生微生物叢、医療環境・制度に関する知識を包括して習得できるよう、「臨学一体」を基盤として、科目間の有機的な連携を重視する。
- (4) 5年次で臨床実習に先立ち、基礎系の各分野に配属し、英文論文抄読から研究立案、実施、発表に至る一連の研究過程を経験する歯学基礎演習・基礎研究実習を通して「科学する心」を育み、次代の教育研究者への志向を涵養する。
- (5) 5、6年次で、「一口腔一単位」、「全人的歯科医療」を基盤とする診療参加型の臨床実習を通して、次代を担いうる歯科医師としての技能と態度を涵養する。
- (6) 1年次から6年次まで、海外短期留学を通して、世界の歯科医療現場を体験することにより、多様な価値観に基づく国際性を養う。
- (7) 各段階の学修の成果は、筆記試験、口頭試験、実技試験等により客観的に評価する。教育科目の特性に合わせ、小テスト、レポート、観察記録等を活用し、評価を実施する。

#### 東北大学歯学部学士課程：英語

The School of Dentistry formulates and implements its curriculum under the following policy, with the aim of cultivating dentists, educators, and researchers who are endowed with broad-based learning, strong character, high ethical standards, and outstanding problem-solving skills.

- (1) The first year is designed to facilitate early motivation to study dentistry and early exposure to the clinical setting.

- (2) The General Education Subjects, studied in the first and second years, nurture the skills necessary for the pursuit of knowledge, as well as the broad-based learning and strong character that underpin those skills. Emphasis is placed on organically linking these subjects with the Specialized Subjects studied from the second year onward.
- (3) The Specialized Subjects, studied from the second year onward, are organically interlinked and are founded on benchside-bedside fusion. They provide comprehensive understanding of human body structure and function at various levels from the molecular to the individual, as well as disease, biomaterials, symbiotic microbiota, and the healthcare environment and system.
- (4) In preparation for practical courses in clinical dentistry, the fifth year assigns students to a specific domain of basic dentistry and requires them to take Seminar for Oral Biosciences and Research Training for Oral Biosciences. These courses nurture the spirit of science by having the students experience the entire process of research, from reading scientific literature in English to developing/implementing a research plan, and presenting the results of their research. The overall aim is to foster the motivation to become part of the next generation of educators and researchers.
- (5) The fifth and sixth years develop the professional skills and attitude needed to become tomorrow's dentists through clinical clerkship practical courses founded on holistic dental care with a whole-of-mouth approach.
- (6) Throughout the program's six years, students are provided with opportunities for short-term study abroad that cultivate international-mindedness grounded in diverse values by exposing the participants to clinical settings in other countries.
- (7) At each stage, learning progress is evaluated objectively through assessments such as written tests, oral tests, and demonstration tests. Evaluation is done based on the results of quizzes, reports, and observation notes, as appropriate for each subject.

## 東北大学薬学部学士課程：日本語

### 【創薬科学科】

#### 1. 教育課程の編成の方針

創薬科学科の教育課程は、ディプロマポリシーで掲げた「教養の涵養」、「専門の修養」、「傾聴力とリーダーシップの鍛錬」および「研究力の深化」の各学習目標を達成するため、全学教育科目、専門教育科目（基幹教育科目、展開教育科目、および研究者教育科目）および教職に関する科目から編成する。各科目で習得される知識、技能、態度および能力を明示したシラバスと、各科目および薬学教育モデルコアカリキュラムとの関係性をカリキュラムマップで可視化し、体系的な講義、演習、実習による学習を促す。

#### 2. 教育課程における教育・学習方法に関する方針

- (1) 教養の涵養：1年次および2年次において、基盤科目、先進科目、言語科目、学術基礎科目を配置し、豊かな人間性と倫理観を身につけるための教養を身につける。
- (2) 専門の修養：1年次から4年次にカリキュラムマップに配置された、物理系科目、化学系科目、生物学系科目、衛生系科目、薬理学系科目、薬剤学系科目および法規科目の講義、演習を通して、生体の仕組みと疾患の原因を理解し、疾患に対する有効かつ安全な医薬品の創製および医薬品の基礎に関する学問を体系的に学び、創薬科学の発展に寄与しうる人となる素養を身につける。



- (3) 傾聴力とリーダーシップの鍛錬：薬学総合科目（薬学概論1、薬学概論2、専門薬科学実習、課題研究）および実習（構造薬学実習、創薬化学実習1、創薬化学実習2、生命薬学実習、医療薬学実習）を通して、傾聴力およびコミュニケーション力の重要性を学び、他者の意見を聴く傾聴力、コミュニケーション力を備え、グループをまとめるリーダーシップを身につける。
- (4) 研究力の深化：実習（構造薬学実習、創薬化学実習1、創薬化学実習2、生命薬学実習、医療薬学実習）および3年次後期から4年次での研究室における専門薬科学実習、課題研究を通して、化学物質と生命の関わりの中において真理を探究し、薬学研究、教育、衛生行政を支える研究心を身につける。さらに、高い英語の理解力のみならず国際的に発信し、コミュニケーションをはかるための総合的な英語力と国際感覚を身につける。

### 3. 学習成果の評価の方針

- (1) 科目については、到達度を確認できる明確な成績評価基準を策定し、これに基づいて成績を評価する。
- (2) 卒業論文ならびに卒業時における資質に関して明確な基準を策定し、評価する。
- (3) 教育課程を、学生の評価も含めて組織的、かつ定期的な評価を実施し、常に改善を続ける。

## 【薬学科】

### 1. 教育課程の編成の方針

薬学科の教育課程は、ディプロマポリシーで掲げた「教養の涵養」、「専門の修養」、「傾聴力とリーダーシップの鍛錬」、「医療人としての使命感」および「研究力の深化」の各学習目標を達成するため、全学教育科目、専門教育科目（基幹教育科目、発展教育科目、実務教育科目および研究者教育科目）および教職に関する科目から編成する。各科目で習得される知識、技能、態度および能力を明示したシラバスと、各科目および薬学教育モデルコアカリキュラムとの関係性をカリキュラムマップで可視化し、体系的な講義、演習、実習による学習を促す。

### 2. 教育課程における教育・学習方法に関する方針

- (1) 教養の涵養：1年次および2年次において、基盤科目、先進科目、言語科目、学術基礎科目を配置し、豊かな人間性と倫理観を身につけるための教養を身につける。
- (2) 専門の修養：1年次から6年次にカリキュラムマップに配置された、物理系科目、化学系科目、生物系科目、衛生系科目、薬理学系科目、薬剤学系科目、病態・薬物治療系科目、法規科目、薬学臨床科目の講義、演習を通して、生体の仕組みと疾患の原因を理解し、疾患に対する有効かつ安全な医薬品の創製および薬物治療に関する基礎的な学問を体系的に学び、薬学の発展に寄与しうる人および薬の専門家として医療の中で貢献できる人となる素養を身につける。
- (3) 傾聴力とリーダーシップの鍛錬：薬学総合科目（薬学概論1、薬学概論2、専門薬学実習、課題研究）、実習（構造薬学実習、創薬化学実習1、創薬化学実習2、生命薬学実習、医療薬学実習）、実務教育科目（医療薬学演習、医療薬学基礎実習、医療薬学病院実習、医療薬学薬局実習）を通して、傾聴力およびコミュニケーション力の重要性を学び、他者の意見を聴く傾聴力、コミュニケーション力を備え、グループをまとめるリーダーシップを身につける。
- (4) 医療人としての使命感：薬学総合科目（薬学概論1、薬学概論2、専門薬学実習、課題研究）、実務教育科目（医療薬学演習、医療薬学基礎実習、医療薬学病院実習、医療薬学薬局実習）を通して、薬剤師の義務と法令を遵守し、医療人としての高い使命感と倫理観を備

える。

- (5) 研究力の深化：実習（構造薬学実習、創薬化学実習 1、創薬化学実習 2、生命薬学実習、医療薬学実習）および 3 年次後期から 6 年次での研究室における専門薬学実習、課題研究を通して、化学物質と生命の関わりの中において真理を探究し、薬学研究、教育、衛生行政を支える研究心を身につける。さらに、高い英語の理解力のみならず国際的に発信し、コミュニケーションをはかるための総合的な英語力と国際感覚を身につける。

### 3. 学習成果の評価の方針

- (1) 科目については、到達度を確認できる明確な成績評価基準を策定し、これに基づいて成績を評価する。
- (2) 卒業論文ならびに卒業時における資質に関して明確な基準を策定し、評価する。
- (3) 教育課程を、学生の評価も含めて組織的、かつ定期的な評価を実施し、常に改善を続ける。

## 東北大学薬学部学士課程：英 語

### 【Department of Pharmaceutical Sciences】

#### 1. Curriculum Design Policy

The curriculum of the Department of Pharmaceutical Sciences comprises general education, specialized subjects (basic, advanced, and researcher-level educational subjects), and teacher training subjects, in order to achieve the learning goals stated in the Diploma Policy – namely cultural accomplishments, competency in the area of expertise, training in listening and leadership skills, and deepening of research ability. The syllabus, which explicitly describes the knowledge, skills, attitudes, and capabilities to be acquired in the various subjects, and the curriculum map, which visualizes the relationship between different subjects and the model core curriculum for pharmacy education, are used to promote systematic learning through lectures, labs, and practical work.

#### 2. Policy on Teaching/Learning Methods in the Curriculum

- (1) Cultural accomplishments: Core subjects, developmental subjects (natural sciences), common subjects (foreign languages), and developmental subjects (humanities and social sciences) are arranged in the 1st and 2nd year to provide students cultural accomplishments necessary to acquire a rich sense of humanity and ethics.
- (2) Competency in the area of expertise: Through lectures and exercises in physics, chemistry, biology, public health, pharmacology, pharmaceuticals, and laws/regulations arranged from the 1st to 4th years in the curriculum map, students understand mechanisms of the living body and causes of diseases, systematically learn about discovery of effective and safe drugs for diseases and basic knowledge about drugs, and prepare to become people who can contribute to the development of drug discovery science.
- (3) Training in listening and leadership skills: Through comprehensive pharmaceutical sciences subjects (Introduction to Pharmaceutical Sciences 1, Introduction to Pharmaceutical Sciences 2, Advance Training in Pharmaceutical Sciences, and Research Training) and practical works (General Training in Analytical Chemistry, General Training in Physical Chemistry, General Training in Organic Chemistry 1, General Training in Organic Chemistry 2, General Training in Life Sciences, General Training in Biopharmacy and Pharmacy Practice), students learn the importance of listening and communication skills and acquire the ability to listen carefully to the opinions of others, communication skills, and leadership skills to organize a group.

- (4) Deepening of research ability: From practical works (General Training in Analytical Chemistry, General Training in Physical Chemistry, General Training in Organic Chemistry 1, General Training in Organic Chemistry 2, General Training in Life Sciences, General Training in Biopharmacy and Pharmacy Practice), and Advance Training in Pharmaceutical Sciences and Research Training in the laboratory from the second half of the 3rd year to the 4th year, students seek to understand the true nature of relationships between chemical substances and biology, and build up the desire to support pharmaceutical research, education, and public health administration. Furthermore, students acquire comprehensive English proficiency, communication skills, and an international outlook, and are capable of communicating their achievements to the world.

### 3. Evaluation Policy for Learning Outcomes

- (1) For subjects, clear grading criteria to measure the level of achievement are established and used for evaluation of the results.
- (2) The Senior Thesis and qualifications for graduation are evaluated according to clear and established criteria.
- (3) The curriculum is constantly improved by way of systematic and regular reviews, including results of student evaluations.

## **【Department of Pharmacy】**

### 1. Curriculum Design Policy

The curriculum of the Department of Pharmaceutical Sciences comprises general education subjects, specialized subjects (basic and advanced educational subjects, on-site training, and researcher-level education), and teacher training-related subjects, in order to achieve the learning goals stated in the Diploma Policy – namely cultural accomplishments, competency in the area of expertise, training in listening and leadership skills, mission as a medical professional, and deepening of research ability. The syllabus, which explicitly describes knowledge, skills, attitudes, and capabilities to be acquired in the various subjects, and the curriculum map, which visualizes the relationship between different subjects and the model core curriculum for pharmacy education, are used to promote systematic learning through lectures, exercises, and practices.

### 2. Policy on Teaching/Learning Methods in the Curriculum

- (1) Cultural accomplishments: Core subjects, developmental subjects (natural sciences), common subjects (foreign languages), and developmental subjects (humanities and social sciences) are arranged in the 1st year and 2nd year to provide students cultural accomplishments necessary to acquire a rich sense of humanity and ethics.
- (2) Competency in the area of expertise: Through lectures and exercises in physics, chemistry, biology, public health, pharmacology, pharmaceuticals, pathology/drug therapy, laws/regulations, and clinical pharmaceutical science, arranged from 1st to 6th years in the curriculum map, students come to understand mechanisms of the living body and causes of disease, systematically learn about discovery of effective and safe drugs for diseases and basic knowledge about drug therapy, and prepare to become people who can contribute to the development of pharmaceutical sciences.
- (3) Training in listening and leadership skills: Through comprehensive pharmaceutical

sciences subjects (Introduction to Pharmaceutical Sciences 1, Introduction to Pharmaceutical Sciences 2, Advance Training in Pharmaceutical Sciences, and Research Training) and practical works (General Training in Analytical Chemistry, General Training in Physical Chemistry, General Training in Organic Chemistry 1, General Training in Organic Chemistry 2, General Training in Life Sciences, General Training in Biopharmacy and Pharmacy Practice), students learn the importance of listening and communication skills and acquire the ability to listen carefully to the opinions of others, communication skills, and leadership skills to organize a group.

- (4) Mission as a medical professional: Through comprehensive pharmaceutical sciences subjects (Introduction to Pharmaceutical Sciences 1, Introduction to Pharmaceutical Sciences 2, Advance Training in Pharmaceutical Sciences, and Research Training) and pharmaceutical practical subjects (General Training in Biopharmacy and Pharmacy Practice, Basic Training in Biopharmacy and Pharmacy Practice, Pharmacy Practice in Hospital, Pharmacy Practice in Community), students comply with pharmacist duties and laws and develop a strong sense of mission and ethics as medical professionals.
- (5) Deepening of research ability: From practical works (General Training in Analytical Chemistry, General Training in Physical Chemistry, General Training in Organic Chemistry 1, General Training in Organic Chemistry 2, General Training in Life Sciences, General Training in Biopharmacy and Pharmacy Practice), and Advance Training in Pharmacy and Research Training in the laboratory from the second half of the 3rd year to the 6th year, students seek to understand the true nature of relationships between chemical substances and biology, and build up the desire to support pharmaceutical research, education, and public health administration. Furthermore, students acquire comprehensive English proficiency, communication skills, and an international outlook, and are capable of communicating their achievements to the world.

### 3. Evaluation policy for learning outcomes

- (1) For subjects, clear grading criteria to measure the level of achievement are established and used for evaluation of the results.
- (2) The Senior Thesis and qualifications for graduation are evaluated according to clear and established criteria.
- (3) The curriculum is constantly improved by way of systematic and regular reviews, including results of student evaluations.

## 東北大学工学部学士課程：日本語

東北大学工学部は、ディプロマ・ポリシーで示した目標を学生が達成できるよう、全学教育科目と専門教育科目をバランスよく配し、講義、演習、実験、実習等を適切に組み合わせたカリキュラムを策定する。

### 教育課程の編成

1. 自然や人間・社会についての幅広い教養を身につけさせるために、自然科学及び人文社会科学に関する全学教育科目を配置する。
2. 工学と自然現象や人間社会との関わりを理解させるために、これらの学問分野に関する専門教育科目を配置する。
3. 社会の課題を解決するために必要となる、情報収集、分析、立案、実行、発表、及びチームワークの能力を育成する科目を配置する。

4. 国際社会の一員として異なる文化を理解する能力，語学・コミュニケーションの基礎能力を育成する科目を配置する。
5. 能動的に学習し，自律的に行動する能力を育成する科目を配置する。

#### 教育方法

1. 教養を高め，工学の基礎知識と専門分野の基盤知識を修得し，主体性と実践力を身に着けるために必要な教育を提供する。
2. 各科目の教授内容および修得すべき知識と能力を明示したシラバスを作成する。
3. カリキュラムマップにより教育課程の全体像を把握させ，計画的な学習を促すとともに，ポートフォリオに学修過程を記録させ，達成度を自覚させる。
4. 専門的な学修の集大成の実践例として卒業研修を行う。

#### 学修成果の評価

1. 授業科目ごとに成績評価の基準及び方法を明示し，これに基づいて客観的に評価する。
2. 学修レベル認定により，学修の到達度を多様な尺度で評価する。

### 東北大学工学部学士課程：英語

The Tohoku University School of Engineering offers a curriculum that appropriately covers General Education Subjects and Specialized Subjects, and that combines lectures, exercises, experiments, practical training, etc., so that students can achieve the goals shown in the Diploma Policy.

#### Curricula:

1. General Education Subjects related to natural sciences, art, and social sciences are offered to help the students develop broad knowledge of nature, human beings, and society.
2. Specialized Subjects are offered to help the students understand the relationships between engineering and natural phenomena and human society.
3. Subjects that develop the students' information gathering, analysis, planning, execution, presentation, and teamwork skills necessary for solving social issues are offered.
4. Subjects that develop the students' ability to understand different cultures as a member of the international community and foster basic language skills and communication skills are offered.
5. Subjects that develop the students' capability for voluntary and disciplined learning are offered.

#### Education Methods:

1. We provide education to help broaden the students' learning, education to develop their ability to take initiative and put into practice, along with providing basic knowledge of engineering and fundamental knowledge in specialized fields.
2. We provide a syllabus that clearly outlines the educational content, knowledge, and abilities to be acquired for each subject.
3. We provide a map covering the overall curriculum to encourage students to make their own study plan. We also provide a portfolio system which records each students' learning outcomes to enable them to see their achievements.
4. Students will engage in Graduation Research, which will serve as a culmination of their specialized studies.

#### Evaluation of learning outcomes:

1. The instructors will clearly state the criteria and method of grade evaluation for each subject, and objectively evaluate the students' learning achievements.
2. The students' learning achievements will be evaluated on various criteria based on the Learning Level Certification System.

## 東北大学農学部学士課程：日本語

東北大学農学部では、ディプロマ・ポリシーで示した目標を学生が達成できるよう、以下の方針に基づき教育課程を編成・実施します。

### 1. 教育課程の編成の方針

- ① 人類の生存基盤である食料, 健康, 環境に関する基盤的知識を習得させる専門教育科目と幅広い知識や素養を育成する全学教育科目を有機的に連関させたカリキュラムを提供します。
- ② 自律的・能動的な学習能力と国際的視野を持って活躍できる能力を育成するための、実践的な実習および研究遂行カリキュラムを提供します。
- ③ シラバスに基づく授業、厳格な学修成果・成績評価、自己評価、授業評価アンケートのサイクルを教育改善に活用します。

### 2. 教育・学習方法に関する方針

- ① 生物の本質を究明する独創的かつ萌芽的な基礎研究を推進し、それを発展させるための実習、卒業研修を設定します。
- ② グローバル社会において、指導的・中核的役割を果たす学生を育成するために、英語教育および留学生との共修授業を行います。
- ③ 卒業時に到達すべき学習目標を各自が設定できるように、履修内容を明記したシラバスを提供し、各科目の関係を可視化したカリキュラムマップを策定します。
- ④ 教育方法の開発と教育システムの整備を不断に進めます。

### 3. 学修成果の評価の方針

- ① 各科目の成績評価は、出席状況、定期試験及びレポート等のシラバスに記載の成績評価方法により、学生便覧に記載の到達度を確認できる成績評価区分に基づいて成績を評価します。
- ② 実習、卒業研修は、農学の理解を促進させる実践型教育を通じて、学生の自律的・能動的学習力を育成・評価し、卒業論文では、これまでの学習で培った専門分野の知識と研究能力及び自身の研究内容を説明できる能力を評価します。

## 東北大学農学部学士課程：英語

The curriculum will be organized and implemented based on the following policies so that students can achieve the mandatory objective indicated in the Diploma Policy.

### 1. Policy on curriculum organization

- (1) The curriculum effectively combines specialized educational subjects on the fundamentals of food, health, and the environment – the foundations of human survival – and university-wide educational subjects to cultivate a wide range of knowledge and a solid background.
- (2) The practical training curriculum serves to cultivate students to play an active role conducting independent research from an international perspective.
- (3) The curriculum is evaluated based on regular questionnaires related to lecture contents in the syllabus, strict learning outcomes and grade evaluation, self-evaluation, and lecture content evaluation for curriculum improvement.

### 2. Policy on education and pedagogy

- (1) We promote original and innovative basic research to understand living organisms, and provide practical and graduation training, as well as guidance on project development.
- (2) We provide English education and classes shared with international students in order to cultivate students who will play a leading and core role in the global society.
- (3) We provide a syllabus that clearly outlines course contents and formulate a curriculum map that visualizes the relationship between each subject, so students can achieve the required learning goals by the time of graduation.

(4) We continue to develop new educational methods and systems.

3. Policy to evaluate learning outcomes

(1) Evaluation of individual grades is conducted according to the grade evaluation method stated in the syllabus in the student handbook, which include regular attendance, examination, and report submission.

(2) Practical training and graduation research foster students' autonomy and validate their active learning abilities through practical education promoting a broad understanding of agriculture. The graduation thesis serves to evaluate each student's knowledge and research ability in the specialized field cultivated during the study, and the ability to comprehensively explain one's own research.