2023 Akita University Faculty of Medicine Syllabus

Category ： 基礎医学 II
Course Title ： Essentials of Anatomy and Osteology
Eligible Students ： grade 1 Related Course
Code ： 71563005
Schedule ： week 2 〜 week 13
Credits ： 0.5+0.5

1. **Lead Instructor**

Yoshio	Bando	(Professor, Dept. of Anatomy, 6053, Office Hour: 随時（要アポイントメント）)

2. **Instructors**

Yoshio	Bando	(Professor, Dept. of Anatomy, 6053, Office Hour: 随時（要アポイントメント）)
Ryoji	Suzuki	(Associate Professor, Dept. of Anatomy, 6054, Office Hour: 随時（要アポイントメント）)
Ming	Zho	(Assistant Professor, Dept. of Anatomy, 6260, Office Hour: 随時（要アポイントメント）)
Hideo	Akashi	(Assistant Professor, Dept. of Anatomy, 6055, Office Hour: 随時（要アポイントメント）)
Masahiko	Watanabe	(Part-time Lecturer, Professor, Hokkaido Univ. Grad. Sch. Med.)
Shigetaka	Yoshida	(Part-time Lecturer, Professor, Asahikawa Med. Univ.)
Shinya	Ugawa	(Part-time Lecturer, Professor, Nagoya City Univ. Grad. Sch. Med.)

3. **Course Description Outline(Course Objectives)**

Aim

In order to learn the pathophysiology of each disease required in medical treatment you are going to understand the basic structures of the major organs and tissues. This course is an introduction to anatomy. In osteology and osteology training course, you are going to understand the bone structures and tissues which support them. In addition, you will study the related professionalism, medical ethics, medical behavioral science, medical safety, medical law (system), EBM.

概要

1)Understand and explain the major organs that make up the human body and the parts and names of the organs.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
2)Learn essential anatomical terms, understand medical expressions, and be able to express them correctly.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
3)Understand the composition, functional differentiation and directional terms of tissues and organs as a group.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
4)Understand the structure and function of blood, hematopoietic organs, and lymphatic system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
5)Understand the normal structure and function of the nervous system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
6)Understand the normal structure and function of the locomotor system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
7)Understand the structure and function of the cardiovascular system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
8)Understand the structure and function of the respiratory system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
9)Understand the normal structure and function of the digestive system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
10)Understand the structure and function of the renal and urinary tract system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
11)Understand the structure and function of the reproductive system.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
12)Understand the structure and function of the ears, nose, throat, and oral cavity.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)
13)Understand and explain the structure of bones.(1-1,2-3〜2-4,3-1〜3-2,4-2,4-6,6-1)

14)Have respect for the deceased and the bereaved family who donated the body, and can attend practical training course with an appropriate attitude.(1-1,2-1～2-5,3-1～3-2,3-6,5-1～5-4,6-1)
15)Can be fully aware of the responsibilities of a medical doctor.(1-1)
16)Can understand your role, build friendly relationships with other members, and cooperate in the training.(1-1,2-1～2-5,2-7,3-5～3-6,4-7)
17)Can listen carefully to the other person's views and opinions understand the problem.(1-1～1-2,2-1～2-7,5-1)
18)Can explain the content to the person you are talking to in an easy-to-understand manner.(1-1～1-2,2-1～2-7)
19)Can outline and comply with laws related to osteology training course.(1-1,3-5～3-6)

4. **Textbook/Reference Books**

1. Introduction to Human Anatomy
There is no optimal textbook as an introductory edition, and lectures based on the textbook cannot always be given, but most part of the lectures are based on "Gray's Anatomy". This text book is also used for lectures of Anatomy at 2nd year student.
(Textbook)
Gray's Anatomy (Elsevier Japan)
(Reference book)
Anatomy Lecture (Nanzan-do)
Structure, function and materials of the human body (Nippon Medical Shinposha)

2. Osteology and osteology training
(Textbook)
Gray's Anatomy (Elsevier Japan)
Osteology Training Guide (Nanzan-do)
(Atlas)
An atlas will be used for osteology training and Gross Aanatomy practical training (2nd year). At least one atlas will be required. Any of the following atlases are fine.
Prometheus Anatomy Core Atlas (Igaku-Shoin)
Netter Anatomy Atlas (Elsevier Japan / Nankodo)
Gray's Anatomy Atlas (Elsevier Japan)

5. **Assessment**

Credit approval is evaluated by a unified examination "touitsu-shiken".However, it is assumed that the unified examination qualifications meet the following conditions.

1) Introduction to Human Anatomy and Osteology (Lecture)
Attendance and exams (Score rate over 60%)
2) Osteology training course
Comprehensively evaluate attendance and sketch assignments. Late arrivals and early departures in osteology training course -3 Points/times, absenteeism without notification of absenteeism -5 Points/times will be deducted from the formative assessment examination. Attendance will be confirmed during the training, but attendance will be accomplished by submitting sketches. Depending on the usage status of the training room, therefore, supplementary classes cannot be given during another period. If you are absent, no submitted sketch will be scored as 0 point. Take care and manage your physical condition.

In the case of comprehensive evaluation of sketches and these examinations results over 60%, it is possible to qualify for taking the unified examination.

Consideration should be given to late arrivals, early departures, and absenteeism due to objectively unavoidable circumstances.

6. **Out of Class Study/Message**

In the osteology training, the following items should be prepared in advance for sketching.

1)A4 Several sheets of Kent paper (osteology training) 1 Average per time 1-2 About a sheet)
2)Pencils (colored pencils if necessary)
3)Kneaded eraser

The syllabus schedule is just a plan and may differ from the actual progress, such as changes due to progress or schedule adjustment of part-time instructors. Therefore, be careful.

The exam will be held on 13th, December. But it may overlap with the other examination. Since the content covered in this lecture and practical training is wide-ranging, I recommend that you review and study well on a regular basis.

Topics and Contents of class, Course Objectives						
	Class Date	**Period**	**Class Format**	**Topics and Contents of class, Course Objectives**	**Instructors**	**Class Room**
1	9 / 25 (Mon)	5-6	Lecture	Theme: Amatomy Lecture 1 Introduction of general human anatomy Understand the outline of human body structure and basic anatomical terms can be expressed accurately.	Yoshio Bando	基礎棟第 1 講義室
2	9 / 25 (Mon)	7-8	Lecture	Theme: Amatomy Lecture 2 Bone and joint general remarks (1) Explain the basic structure and function of bones, cartilage, joints, and ligaments.	Yoshio Bando	基礎棟第 1 講義室
3	9 / 25 (Mon)	9-10	Lecture	Theme: Amatomy Lecture 3 Bone and joint general remarks (2) (1) Explain the basic structure and function of bones, cartilage, joints, and ligaments (2) Explain the mechanism of bone growth and bone formation/resorption.	Yoshio Bando	基礎棟第 1 講義室
4	10 / 2 (Mon)	5-6	Lecture	Theme: Anatomy Lecture 4 Muscular system (1) (1) Explain the structure and function of the major muscles of the whole body. (2) Explain the innervation, and function of major muscles.	Ryoji Suzuki	基礎棟第 1 講義室
5	10 / 2 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 5 Muscular system (2) (1) Explain the structure and function of the major muscles of the whole body. (2) Explain the innervation, and function of major muscles.	Ryoji Suzuki	基礎棟第 1 講義室
6	10 / 2 (Mon)	9-10	Lecture	Theme: Anatomy Lecture 6 Muscular system (3) (1) Explain the structure and function of the major muscles of the whole body. (2) Explain the innervation, and function of major muscles.	Ryoji Suzuki	基礎棟第 1 講義室
7	10 / 16 (Mon)	5-6	Lecture	Theme: Osteology Lecture 1 Spine and Thorax (1) Explain the basic structure of the spine and thorax. (2) Explain the connections between vertebrae and the structure of the spinal column.	Ming Zho	基礎棟第 1 講義室
8	10 / 16 (Mon)	7-10	Practice	Theme: Osteology training 1 Spine and thorax Observe and sketch the spine and thorax. (1) Explain the basic structure of the vertebrae and the composition of the spinal column and thorax. (2) Explain the differences in vertebrae features. (3) Explain the name and function of the vertebrae. (4) Outline the muscle groups involved in posture and trunk movement. (5) Explain the connection between bones.	Yoshio Bando Ryoji Suzuki Ming Zho Hideo Akashi	第 2 実習室
9	10 / 23 (Mon)	5-6	Lecture	Theme: Osteology Lecture 2 Upper limb band and free upper limb Explain the basic structure of the upper limb band and free upper limb.	Hideo Akashi	第 2 実習室

Topics and Contents of class, Course Objectives						
	Class Date	**Period**	**Class Format**	**Topics and Contents of class, Course Objectives**	**Instructors**	**Class Room**
10	10 / 23 (Mon)	7-10	Practice	Theme: Osteology training 2 Upper limb band and free upper limb 上肢帯と自由上肢の観察とスケッチを行う。 Observe and sketch the upper limb band and free upper limb. (1) Explain the structure of the joints of the upper limbs. (2) Explain the relationship between the bones of the upper limbs and the major muscles. (3) Explain the name and function of the bones of the upper limbs.	Yoshio Bando Ryoji Suzuki Ming Zho Hideo Akashi	基礎棟第 1 講義室
11	10 / 30 (Mon)	5-6	Lecture	Theme: Osteology Lecture 3 Pelvis and free lower limbs Explain the basic structure of the pelvis and free lower limbs.	Ming Zho	基礎棟第 1 講義室
12	10 / 30 (Mon)	7-10	Practice	Theme: Osteology training 3 Pelvis and free lower limbs Observe and sketch the pelvis/pelvic girdle and free lower limbs. (1) Explain the structure and gender of the pelvis. (2) Explain the holes in the pelvis and what goes in and out. (3) Explain the structure of the joints of the lower limbs. (4) Explain the relationship between the bones of the lower limbs and the major muscles. (5) Explain the name and function of the bones of the lower limbs.	Yoshio Bando Ryoji Suzuki Ming Zho Hideo Akashi	第 2 実習室
13	11 / 6 (Mon)	5-6	Lecture	Theme: Osteology Lecture 4 skull (1) Explain the basic structure of the skull and face. (2) Explain the bones and holes and what goes in and out in the internal and external skull bases	Ryoji Suzuki	基礎棟第 1 講義室
14	11 / 6 (Mon)	7-10	Practice	Theme: Osteology training 4 skull Observe and sketch the inner and outer skull bases. (1) Explain the name of each skull base and the structure. (2) Explain 3 dimensional relationship between head/face bones and muscles/nerves/blood vessels.	Yoshio Bando Ryoji Suzuki Ming Zho Hideo Akashi	第 2 実習室
15	11 / 13 (Mon)	5-6		Theme: reserved		基礎棟第 1 講義室
16	11 / 20 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 7 Nervous system (1) Central nervous system Explain the outline of the central nervous system.	Yoshio Bando	基礎棟第 1 講義室
17	11 / 20 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 8 Nervous system (2) Peripheral nervous system Explain the outline of the central nervous system.	Yoshio Bando	基礎棟第 1 講義室
18	11 / 20 (Mon)	9-10	Lecture	Theme: Anatomy Lecture 9 Heart Explain the basic structure of the heart.	Yoshio Bando	基礎棟第 1 講義室
19	11 / 27 (Mon)	5-6	Lecture	Theme: Anatomy Lecture 10 Blood vessels / lymphatic system (1) Explain the running and function of the major arteries, veins, and lymph of the whole body	Yoshio Bando	基礎棟第 1 講義室

Topics and Contents of class, Course Objectives						
	Class Date	**Period**	**Class Format**	**Topics and Contents of class, Course Objectives**	**Instructors**	**Class Room**
20	11 / 27 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 11 Blood vessels / lymphatic system (2) Explain the running and function of the major arteries, veins, and lymph of the whole body	Yoshio Bando	基礎棟第 1 講義室
21	11 / 27 (Mon)	9-10	Lecture	Theme: Anatomy Lecture 12 Respiratory system (1) Explain the basic structure of the respiratory system.	Yoshio Bando	基礎棟第 1 講義室
22	12 / 4 (Mon)	5-6	Lecture	Theme: Anatomy Lecture 13 Respiratory system (2) Explain the basic structure of the respiratory system.	Yoshio Bando	基礎棟第 1 講義室
23	12 / 4 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 14 Digestive organs (1) Explain the basic structure of the upper gastrointestinal tract.	Yoshio Bando	基礎棟第 1 講義室
24	12 / 4 (Mon)	9-10	Lecture	Theme: Anatomy Lecture 15 Digestive organs (2) Explain the basic structure of the lower gastrointestinal tract.	Yoshio Bando	基礎棟第 1 講義室
25	12 / 11 (Mon)	5-6	Lecture	Theme: Anatomy Lecture 16 Kidney/urinary system Explain the basic structure of the kidney and urinary system.	Yoshio Bando	基礎棟第 1 講義室
26	12 / 11 (Mon)	7-8	Lecture	Theme: Anatomy Lecture 17 Genital 1) Explain the basic structure of the male reproductive organs. 2) Explain the basic structure of the female reproductive organs.	Yoshio Bando	基礎棟第 1 講義室
27	12 / 11 (Mon)	9-10	Lecture	Theme: Special Lecture (planned) A special lecture will be given by an outside lecturer.	Masahiko Watanabe	基礎棟第 1 講義室
28	12 / 18 (Mon)	5-6	Examination	Theme: Examination Introductory human anatomy and osteology (including osteology training) examination will be performed to judgement to be able to take the unified examination. As a general rule, do not retest. The test range for the introduction to human anatomy is up to the previous week.	Yoshio Bando	基礎棟第 1 講義室
29	12 / 18 (Mon)	7-8	Lecture	Theme: Special Lecture (planned) A special lecture will be given by the outside lecturer.	Shinya Ugawa	基礎棟第 1 講義室
30	12 / 18 (Mon)	9-10	Lecture	Theme: Special Lecture (planned) A special lecture will be given by the outside lecturer.	Shigetaka Yoshida	