科目名　Course Title	
生理・解剖学1(Physiology and Anatomy I)	
学科・専攻　Department/Program	受講年次　Grade
G30 Biology	2nd
授業形態　Class style	必修・選択の別　Compulsory or Elective
講義	* See "Remarks"
時間割コード　Registration code	開講期・曜日・時限　Semester,Day & Period
0682260	Fall semester Mon：2
単位数　Credit	科目区分　Course type
2	

担当教員　Instructor	VASSILEVA Maria(VASSILEVA Maria)
所属研究室　Laboratory	
連絡先　Contact	
居室　Room	

講義の目的とねらい　Course purpose

Aims: This course is designed to deepen students` knowledge in human physiology and anatomy. The course focuses on understanding the fundamental mechanisms underlying normal function of organs, and relating these mechanisms to how those functions change in disease.
Students will familiarize themselves with the appropriate scientific terminology and advanced physiology concepts.

履修要件　Prerequisite

Strongly recommended to have completed Fundamentals of Biology II

履修取り下げの方法について　How to Apply for Course Withdrawal

<「履修取り下げ届」提出の要・不要 Necessity/Unnecessity to submit "Course Withdrawal Request Form">
Necessary
<条件等 Conditions>
Students need to submit a Course Withdrawal Request Form when they have no intention of finishing the course. Submission of Course Withdrawal Request form is required for receiving Absent grade. This can be done any time during the semester by contacting the lecturer over e-mail.

成績評価　Grading

Evaluation is be based on class participation, assignments and examinations. A minimum grade of 60/100 in every category is necessary to receive a passing grade.

不可（F）と欠席（W）の基準　Criteria for "Absent(W)" &"Fail" grades

Absent: based on submission of Course Withdrawal Request Form.
Fail: Total accumulated score of less than 60%.

関連する科目　Related courses

Fundamentals of Biology 2

教室　Class room

Check the Course Timetable.
A 408 (in Fall 2020 this course may be conducted entirely online, information about the actual course format will be provided on NUCT course space)

到達目標　Goal

By the end of this course students should be able to clearly explain in appropriate scientific terminology fundamental physiological processes and their implication in disease:
(1) the mechanism of breathing and gas exchange
(2) the mechanism of action potential generation in the heart and its difference from neuron's action potential
(3) the mechanism of blood pressure generation and maintenance
(4) the mechanism of nephron participation in homeostasis of solutes and water, and its regulation
(5) the mechanism of digestion and absorption, including autonomic gastrointestinal regulation and its participation in nutrient homeostasis
(6) fundamental mechanisms of endocrine system regulation of body processes, including specific mechanisms associated with major hormones
(7) mechanisms of prenatal sex determination, gametogenesis, including effect and regulation of sex hormones
Students will also gain experience reading clinical texts and relating them to physiological mechanisms.

授業内容　Content

1. Respiratory system
2. Cardiovascular system
3. Renal system
4. Gastrointestinal system
5. Endocrine system
6. Reproductive system

Students are required to prepare for every class by reading the assigned textbook material and create schematic summary of important concepts before class.

教科書　Textbook

Anatomy and Physiology by OpenStax College, free downloadable textbook
(https://openstaxcollege.org/textbooks/anatomy-and-physiology)

参考書　Recommended reading

1. Berne & Levy Principles of Physiology, Levy, Koeppen and Stanton; Mosby.
2. Human Physiology, The basis of medicine, Pocock and Richards; Oxford University Press.
3. Physiology, 3rd ed., Constanzo; Elsevier.
4. Netter`s Essential Physiology, Mulroney and Myers; Saunders.

連絡方法　Contact method

The course instructor is available for questions outside the class time by e-mail.

その他　Remarks

*See Course List and Graduation Requirements for your program for your enrollment year.
The class time focuses on discussion, so it is essential for students to come prepared.