Category （科目区分）	Cluster Common Basic Subjects		
Course Title （授業科目名）	Basic Medical Technology Practice – Introduction to Computer Programming –		
Instructors （担当者名）	Masayuki Katahira	Academic Year （配当年次）	1,2
Required Course / Elective Course （必修/選択）	Elective Course	Credits （単位数）	1
Class Format （授業形態）	WebClass (on demand)		
Schedule （開講期間）	From around late April 2025 to December 31, 2025		
Class Date/Period （開講曜日・時間）	WebClass (on demand)		

Course Outline/ Course Objectives（授業の概要・到達目標）

Course Objectives:
The purpose of this practical training is for non-computer specialists to experience how computers perform information processing by creating programs using simple programming languages and actually running them.
To experience how the information processing devices we use in our daily lives are operated by constructing processes behind the scenes, even if it is only a small part. Through this experience, you will learn that a computer running on a human-made program is not necessarily perfect, and that you should not trust it too much.

Course Outline:
Programming languages are artificial languages used to instruct computers to perform operations, and there are many types from simple to advanced.In this exercise, we will focus on the following three simple programming languages, which are considered to be easy for beginners to learn.

1) Scratch, a programming language for beginners
2) Python, and 3) Perl, a more practical programming language.

If you have some experience with Scratch, or if you feel that Scratch is too beginner-friendly, you can skip the Scratch practices; you can do almost the same practices in Python as in Scratch.
1. Introduction: Introduction to computers, programming languages, and this exercise
2. Practice with Scratch, a programming language for beginners (experienced users may skip this part)
3. Introduction to the Python programming language (how to make it work, etc.)
4. Basics of the Python programming language (basic grammar practice)
5. Application of the Python programming language (simple information processing programs)
6. Python programming language practice (Turtle graphics)
7. Introduction to the Perl programming language (how to make things work)
8. Basic Perl programming language (basic grammar practice)
9.-11. Applications of the Perl programming language (simple information processing programs)
12. Perl programming language practice (slightly practical application programs)
13.-14. Free assignments in Perl programming language (each student decides on a theme and tries to create some information processing programs using Perl)

Course Planning (授業計画)

	Course Outline/ Course Objectives(授業の概要及び到達目標) (Contents of Class) ((授業内容))	Instructor (担当教員名)	Department (講座名) Class Room 〔実施場所〕
1	Introductgion:about this practice	Associate Professor Masayuki Katahira	Department of Medical Informatics 〔WebClass (on demand)〕
2	Scratch programing practice		
3	Python programing practice (how to install)		
4	Python programing practice (basic tasls)		
5	Python programing practice (applied tasks)		
6	Python programing practice (developmental tasks)		
7	Perl programing practice (how to install)		
8	Perl programing practice (basic tasls)		
9	Perl programing practice (applied tasks part 1)		
10	Perl programing practice (applied tasks part 2)		
11	Perl programing practice (applied tasks part 3)		
12	Perl programing practice (practicall tasks)		
13	Perl programing practice (free assignments 1)		
14	Perl programing practice (free assignments 2)		

Grading Criteria (成績評価の基準と方法)

Grades will be based on your WebClass learning history and the content of the reports you submit.

Contact Information (問い合わせ先(氏名, メールアドレス等))

Name: Masayuki Katahira / E-mail: katahira@med.akita-u.ac.jp

Comment (その他特記事項)

Course Information:
Students are expected to watch the lectures on WebClass. Viewing period: Late April to December 31
Practical training will be basically conducted by e-Learning using the WebClass system.
Students are expected to study the course materials and practical assignments prepared on WebClass at their own pace.
If you have any questions or need additional explanations, please contact us by e-mail.
If necessary, we can arrange a time for face-to-face explanations on a case-by-case basis.
Textbooks and reference materials:
Reference materials will be uploaded on WebClass.
Content of study during self-study time:
It is desirable to do preparatory study according to the objectives and class content.