

1. Outline of the program

Joint Degree Doctoral Program in Medical Sciences between Tokyo Medical and Dental University and Mahidol University

Human Resource Development Goals

This program is designed to foster advanced medical personnel involved in the treatment of diseases in a super aging society, especially multidisciplinary treatment such as cancer treatment:

- (1) Surgeons who can advance the field of cancer treatments;
- (2) Skilled medical research scientists who can promptly respond to the needs of society;
and
- (3) Leaders who can advance the medical sciences and healthcare fields in Japan, Thailand and throughout the ASEAN region.

Diploma Policy

The Program confers the degree of Doctor of Philosophy on students who attain the required credits, pass the dissertation defense and final examinations and can do all of the following.

- (1) Ability to acquire advanced specialized knowledge, technique, applied skills in the field of surgery and to independently carry out pioneering research activities.
- (2) Ability to accurately summarize, widely explain and disseminate research results in the fields of surgery and biomedical sciences related to surgery.
- (3) Ability to identify international issues related to surgical medicine and solve problems from an international perspective; and the capacity to play a leading role in the field of education and research.

Curriculum Policy

The curriculum has been designed based on the following policies in order to create an environment in which students can acquire the knowledge, skills, experience and leadership abilities necessary to obtain a degree and become a highly specialized medical professional.

- (1) Establish “Clinical Core Subject I” to enable students to acquire advanced skills in specialized fields through specific research themes in clinical surgery. Establish jointly designed “Clinical Core Subject II” to enable students to acquire a wide range of knowledge, analytical abilities, and basic/applied skills in surgery and in biomedical sciences related to surgery, as well as developing an international perspective.
- (2) Establish “Clinical Statistics and Biomedical informatics” to enable students to acquire the basic knowledge of statistics and epidemiology necessary to conduct international-level research.
- (3) Establish “Cancer Professional Training Subjects” to enable students to acquire comprehensive knowledge and skills related to cancer and methodologies for conducting clinical research, which are required of leaders in cancer treatment.
- (4) Establish “Research core subjects” to enable students to cultivate the knowledge and research skills necessary to explore research themes in their surgical specialty, and acquire the knowledge and analytical skills necessary for basic research related to those themes.
- (5) Establish “Experiments and Thesis Writing” under the guidance of both universities to enable students to write original and practical papers based on scientific evidence through independent research on specific research topics related to surgical specialties.
- (6) Evaluate student academic performance based on formative and summative criteria, as described in the syllabus, in order to achieve educational goals.
- (7) Evaluate thesis/dissertation strictly based on diploma policy, and conduct thesis/dissertation defense and final examination appropriately.

Admissions Policy

《What We Expect of Our Students》

This program aims to foster highly skilled experts as well as global leaders who possess a wealth of knowledge in the fields of biomedical and medical sciences, especially in surgery, not only in Japan and Thailand, but also throughout Southeast Asia. Qualified applicants who meet any of the following criteria are therefore highly encouraged to apply for our program.

- 1) Eager to acquire advanced clinical ability, basic knowledge and techniques in the field of surgery, or understanding grounded in the latest research in the field of surgery.

- 2) Eager to be independent basic-clinical researchers in the fields of surgery with the capacity to take the lead in national/international clinical research projects or clinical education upon completion of this course.

《Basic Entrance Examination Policies》

Applicants are evaluated in a comprehensive manner through an oral examination and application document to assess ability to carry out scholarship and research in this program, aptitude and motivation.

Standard Number of Years Required for Completion and Conferral of Academic Degree

Four years are normally required to completion. A degree of “Doctor of Philosophy” will be awarded to students who attain the required credits and pass the dissertation defense.

2. Requirements for completion and course registration

Requirements for completion

An academic degree (Doctor of Philosophy in Medical Sciences) will be jointly conferred by TMDU and MU on students who have satisfied the following conditions in 4 years or more (8 years maximum). One credit is equivalent to 45 hours of study in both universities.

- (1) The required number of credits prescribed by both Japanese law and by TMDU and by Thai law and by MU must be satisfied to complete this Program.
- (2) The student shall be enrolled for 4 or more years, during which time he/she shall acquire 72 or more credits for the course, receive necessary research guidance, submit a dissertation and pass the dissertation defense and final examination.
- (3) Dissertation articles or a part thereof shall already have been published in, or have been accepted for application by, a peer-reviewed international academic journal by January of the final year.
- (4) Retroactive degree applications are not acceptable.

Acquisition of Credits

A total of 72 credits shall be required for completion of the Program.

- (1) Lecture courses; "Clinical Statistics and Biomedical Informatics", "Cancer Professional Training" normally requires 15 teaching hours are equal to 1 credit.
- (2) Practicum courses; "Clinical Core Courses", "Research Core Courses" that provides at least 30 hours of clinical practice or experimentation per semester are equal to 1 credit.
- (3) Internships or practical experiment; "Directed Research and Thesis Writing" that provides no less than 45 hours of training in a regular semester are equal to 1 credit.

Course requirements

Students must acquire 72 credits from among the following subjects:

- (1) Clinical Core subjects—compulsory: 2 credits either of Clinical Core Subject I (TMDU), or Clinical Core Subject I (MU).
- (2) Clinical Core subjects—compulsory: 5 credit of Clinical Core Subject II.
- (3) Clinical Statistics and Biomedical informatics (Each subject 2 credits) —elective:
4 credits from among the following five subjects;
Overview of Public Health Medicine in Disease Prevention, Epidemiology,
Clinical Biostatistics and Statistical Genetics, Research methodology in Biomedicine,
Biostatistics in Biomedicine.
- (4) Cancer Professional Training Subjects (Each subject 1 credit) —elective:
2 or more credits at TMDU and 2 more credits at MU.
- (5) Research core subjects (Each subject 1 credit) —elective:
Surgery: 4-8 credits
Biomedical sciences related to Surgery: 0-4 credits
- (6) Experiments and Thesis Writing—compulsory:
24 credits at TMDU and 24 credits at MU.
- (7) In addition to at least the 72 credits mentioned above (24 credits of subjects established by TMDU, and 48 credits of subjects established by CU), all students must receive necessary research guidance, submit a dissertation and pass a dissertation defense. The dissertation should be published in a refereed international academic journal prior to the dissertation defense.

Assessment

Academic records at TMDU and MU will be recorded and converted according to the following table.

Grade Conversion

Tokyo Medical and Dental University			Mahidol University			Standards for Specific Behavioral Objectives (SBOs)
GP	Assessment		GP	Assessment		
4.0	A+	Superior	4.0	A	Excellent	All SBOs were achieved beyond expectation.
			3.5	B+	Very Good	
3.5	A	Excellent	3.0	B	Good	All SBOs were achieved.
3.0	B	Good	2.5	C+	Fairly Good	Most SBOs were achieved.
2.0	C	Fair	2.0	C	Fair	The minimum SBOs necessary were achieved.
1.0	D	Failing	1.5	D+	Poor	The minimum SBOs necessary were not achieved.
			1.0	D	Very Poor	
0.0	F		0	F	Failing	Unable to evaluate based on insufficient SBOs.

4. Subject List

Category	Course ID	Code	Subjects		Chief Instructor	Compulsory / Elective	Credits		Lecture/ Practice/ Laboratory activities	E-Learning available	
			Japanese	English			TMDU	MU			
I 臨床基幹科目 Clinical Core subjects (7)	GS-c4801-S	4801	臨床基幹科目 I (TMDU)	Clinical Core Subject I (TMDU)	Prof. Keiichi Akita	CE	2		P		
	GS-c4802-S	4802	臨床基幹科目 I (MU)	Clinical Core Subject I (MU)	Assoc. Prof. Vitoon Chinswangwatanakul	CE		2	P		
	GS-c4803-S	4803	臨床基幹科目 II	Clinical Core Subject II	Prof. Tanabe/Assoc. Prof. Vitoon	C	5		P		
II 臨床統計・情報医学関連専門科目 Clinical Statistics and Biomedical informatics (4)	GS-c4810-L	4810	疾患予防パブリックヘルス医学概論	Overview of Public Health Medicine in Disease Prevention	Prof. Keiko Nakamura	E	2		L	○	
	GS-c4811-L	4811	疫学	Epidemiology	Prof. Takeo Fujiwara	E	2		L	○	
	GS-c4812-L	4812	臨床・遺伝統計学	Clinical Biostatistics and Statistical Genetics	Prof. Kunihiko Takahashi	E	2		L	○	
	GS-c4813-L	4813	生物医学研究法	Research methodology in Biomedicine	Assoc. Prof. Cherdak Iramaneerat	E		2	L	○	
	GS-c4814-L	4814	生物医学統計概論	Biostatistics in Biomedicine	Assoc. Prof. Chutwichai Tovikkai	E		2	L	○	
III がん医療専門科目 Cancer Professional Training Subjects (5)	GS-c4820-L	4820	がん生物学・解剖学・病理特論	Overview of Cancer: Cancer Biology, Pathology and Anatomy	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4821-L	4821	低侵襲がん治療 I	Minimal Invasive Treatment for Cancer I	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4822-L	4822	低侵襲がん治療 II	Minimal Invasive Treatment for Cancer II	Pro. Masahiko Miura	E	1		L	○	
	GS-c4823-L	4823	臓器別がん	Organ-specialized Cancer	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4824-L	4824	小児・希少がん	Pediatric and rare cancers	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4825-L	4825	臨床腫瘍学	Advanced Clinical Oncology	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4826-L	4826	がんゲノム	Cancer genomics and precision medicine	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4827-L	4827	緩和ケア・緩和医療学概論	Palliative Medicine: Outline	Prof. Satoshi Miyake	E	1		L	○	
	GS-c4828-L	4828	がんの生物学とがんの免疫学概論	Applied Cancer Biology and Immunology	Instructor Pradit Rushatamukayanunt	E		1	L	○	
	GS-c4829-L	4829	幹細胞治療学概論	Stem cell for Surgical Patient	Assoc. Prof. Nuttawut Sermathanasawadi	E		1	L	○	
	GS-c4830-L	4830	標準検査学概論	Basic Laboratory Relevance to Surgery	Instructor Doonyapat Sa-nguanraksa	E		1	L	○	
	GS-c4831-L	4831	がんの画像診断学概論	Cancer Imaging	Assoc. Prof. Prawej Mahawithitwong	E		1	L	○	
	GS-c4832-L	4832	泌尿器科ロボット支援手術	Robotic Surgery in Urology	Prof. Sittiporn Srinualnad	E		1	L	○	
	GS-c4833-L	4833	基礎鏡視下手術概論	Basic Surgical Endoscopy	Asist. Prof. Jirawat Swangsri	E		1	L	○	
	GS-c4834-L	4834	消化器癌における学際的内視鏡診断学	Advanced Inter Disciplinary Endoscopy for Gastrointestinal Tract Cancer	Prof. Thawatchai Akaraviput	E		1	L	○	
GS-c4835-L	4835	周術期患者管理学概論	Perioperative Care Surgical Patient	Prof. Varut Lohsiriwat	E		1	L	○		
IV 研究基幹科目 Research core subjects (8)	外科系専門科学 Surgery (4-8)	GS-c4840-S	4840	総合外科学特論	Specialized Surgeries	Assoc. Prof. Toshiaki Ishikawa/ Assoc. Prof. Toshifumi Kudo	E	4		P	○
		GS-c4841-S	4841	消化管外科特論	Gastrointestinal Surgery	Prof. Yusuke Kinugasa	E	4		P	○
		GS-c4842-S	4842	肝胆膵外科学特論 (TMDU)	Hepatobiliary Pancreatic Surgery (TMDU)	Prof. Minoru Tanabe	E	4		P	○
		GS-c4843-S	4843	頭頸部外科学特論	Head and Neck Surgery	Prof. Takahiro Asakage	E	4		P	○
		GS-c4844-S	4844	腎泌尿器外科学特論 (TMDU)	Urology (TMDU)	Prof. Yasuhisa Fujii	E	4		P	○
		GS-c4845-S	4845	上部消化管外科特論	Surgery for Upper GI Cancer	Assoc. Prof. Asada Methasate	E		4	P	○
		GS-c4846-S	4846	下部消化管外科特論	Surgery for Lower GI Cancer	Assoc. Prof. Woramin Riansuwan	E		4	P	○
		GS-c4847-S	4847	肝胆膵外科学特論 (MU)	Hepatobiliary Pancreatic Surgery (MU)	Assoc. Prof. Yongyut Sirivatanauksorn	E		4	P	○
		GS-c4848-S	4848	血管外科学特論	Vascular Surgery	Assoc. Prof. Chumpol Wongwanit	E		4	P	○
	GS-c4849-S	4849	頭頸部・乳腺外科学特論	Multidisciplinary Approach to Disease of Head Neck and Breast	Assoc. prof. Suebwong Chutapisith	E		4	P	○	
	GS-c4850-S	4850	泌尿器外科学特論 (MU)	Urology	Assoc. Prof. Sittiporn Srinualnad	E		4	P	○	
	外科系関連医学 Biomedical sciences related to Surgery (0-4)	GS-c4861-S	4861	幹細胞制御特論	Stem Cell Regulation	Prof. Tetsuya Taga	E	4		P	○
		GS-c4862-S	4862	臨床解剖学特論	Clinical Anatomy	Prof. Keiichi Akita	E	4		P	○
		GS-c4863-S	4863	発生再生生物学特論	Developmental and Regenerative Biology	Prof. Hiroshi Nishina	E	4		P	○
		GS-c4864-S	4864	バイオメカニクス特論	Biomechanics	Prof. Yoshikazu Nakajima	E	4		P	○
		GS-c4865-S	4865	臨床腫瘍学特論	Clinical Oncology	Prof. Satoshi Miyake	E	4		P	○
		GS-c4866-S	4866	システム薬理学特論	Principles in Systems Pharmacology	Instructor Somponnat Sampattavanich	E		4	P	○
GS-c4867-S		4867	幹細胞科学	Stem Cell Science	Assoc. Prof. Nuttawut Sermathanasawadi	E		4	P	○	
V 研究実践と論文作成 Experiments and Thesis Writing(48)		GS-c4870-T	4870	研究実践と論文作成 (TMDU)	Experiments and Thesis writing at TMDU	Prof. Keiichi Akita	C	24		LA	
	GS-c4871-T	4871	研究実践と論文作成 (MU)	Experiments and Thesis writing at MU	Assoc. Prof. Vitoon Chinswangwatanakul	C		24	LA		

4. Information for Students

1) Contact and Notification

Notifications and other information are posted on university bulletin boards or the TMDU website (Click on the tab for “Current Students” or “Schools/Graduate Schools”.)

When emergency measures for natural or weather-related disasters such as typhoons are taken, causing the full suspension of public transportation services, lectures and examinations may be canceled or rescheduled. Notifications of such will be announced on the TMDU website (Click on the tab for “Schools / Graduate Schools-News & Events”).

Bulletin boards are located in front of Bldg. 6, in front of the Educational Planning Section on the 1st floor of Bldg. 1 and in front of the Student Support Office on the 3rd floor of Bldg. 5. Please check these boards regularly.

When necessary, students will be contacted individually on the phone, via email or by mail. If your address or phone number changes, please update your contact information with the Educational Planning Section.

2) Student ID Card

Your student ID card serves as proof of student status and as a nametag. It is also an IC card and will enable you to unlock some school entrances and register your attendance for classes. Please be careful not to damage or lose it.

Additionally, please carry your student ID card with you at all times. You may also be asked to show it when you buy a commuter pass.

(1) Reissuance

Students should promptly notify the Educational Planning Section if their ID card has been lost or damaged, and complete the procedures to have the card reissued. Please note that a fee will be charged for reissuance.

(2) Return of card

Students should promptly return their ID card to the Educational Planning Section upon graduation, withdrawal or expulsion, or when the card expires. Please note that if the card has been lost and cannot be returned, a fee will be charged equal to that of reissuance.

(3) Updating the period of validity

If your enrollment period has been extended and your student ID card has expired, please visit the Educational Planning Section to update your card.

(TEL: 03-5803-5074)

3) Certificates

Some certificates and other official documents are issued by JD & MPH Unit, International Exchange Section, while others may be obtained from automatic document issuing machines.

Place	Items	Service hours	Office
Document vending machine Bldg. 5, 4 th floor Student Lounge	Certificate of Enrollment (Japanese)	8:30-21:00 (Student ID card is required.)	Thesis and Dissertation Team, Educational Planning Section TEL : 5803-5074
	Student Discount Card for JR		
JD & MPH Unit, International Exchange Section* Bldg. 1, 4 th floor	Certificate of Enrollment (English)	8:30-17:15	JD & MPH Unit, International Exchange Section TEL : 5803-4678
	Transcript (Japanese/English)		
	Certificate of Expected Graduation <Master's Program> (Japanese/English)		
	Other certificates (Japanese/English)		
Educational Planning Section* Bldg. 1, 1 st floor Educational Planning Section* Bldg. 1, 1 st floor	Certificate of Expected Graduation <Doctoral Program> (Japanese/English)	8:30-17:15	Thesis and Dissertation Team, Educational Planning Section TEL : 5803-5074

*Certificates issued by the JD & MPH Unit, International Exchange Section

Please visit the JD & MPH Unit, International Exchange Section and submit the relevant application form. It may take a few days to issue a Japanese certificate and about a week for an English certificate.

*Certificates for those who have already completed a course are also issued by JD & MPH Unit, International Exchange Section.

Available certificates are: Certificate of Awarded Diploma, Transcript, Certificate of Past Enrollment, and Certificate of Degree.

How to apply for a certificate by mail

If you need to apply for a certificate that is not available from the document vending machines, you can send the application form by mail to the following address. Please send the application form along with a self-addressed envelope with a 120-yen stamp affixed. The envelope should be at least 240×332 mm in size so that an A4 size document can be inserted without folding.

Address

JD & MPH Unit, International Exchange Section, Tokyo Medical and Dental University
1-5-45 Yushima, Bunkyo-ku, Tokyo
Postal code: 113-8510

4) Student Discount Card for JR

- (1) Students can get a 20% discount on JR Line tickets for travel that exceeds 100 kilometers one way. The purpose of this service is to help ease students' financial burden and promote school education. You can use the Student Discount Card at JR for a maximum of 10 tickets per person per year, and the card is valid for 3 months.
- (2) Caution: Please do not use this service in an inappropriate or illegal manner.
Do not:
 1. Buy a discounted ticket by using the student ID card of another person.
 2. Give someone a ticket that you bought.
 3. Use an expired ticket.

If you commit any of these actions, you may be required to pay a penalty of twice the regular fare. Furthermore, this service for all students at TMDU may be suspended as a result.

- (3) The Student Discount Card for JR is available from the document vending machines in the Student Lounge in Bldg. 5, 4th floor.

Service hours: 8:30 a.m. to 9:00 p.m. on weekdays
Office: Educational Planning Section (TEL: 03-5803-5074)

5) Change of address/surname/ legal domicile/telephone number

A student who changes his/her address, legal domicile, surname or telephone number must promptly notify Graduate Education Team 1 or 2 in the Educational Planning Section and follow the necessary procedures. A student who has a change in their guarantor's information must also do the same.

If you fail to inform the Educational Planning Section of any changes, the university may not be able to contact you in case of an emergency.

Office

JD & MPH Unit, International Exchange Section (Bldg. 1, 4th floor)

Notification form

	Form	Necessary documents
Change of surname	Change of name form	Proof of name change
Change of address or legal domicile	Change of address or legal domicile form	Proof of change of address or legal domicile
Change of guarantor	Change of guarantor form	N/A

6) Request for permission to attend external practical training

If you would like to attend an external practical training course, you must submit the request form to JD & MPH Unit, International Exchange Section two weeks before the start date. (If you would like to attend training abroad, you must submit your request two months before the start date.)

7) Lost and found property

Lost property found on the university campus is handled by the following offices.

- (1) Lost property found inside the building of the Faculty of Medicine:
General Affairs Section, Administration Division, Faculty of Medicine
(Bldg. 3, 6th floor, TEL: 5803-5096)
- (2) Lost property found inside the building of the Faculty of Dentistry:
General Affairs Section, Administration Division, Faculty of Dentistry and
Dental Hospital (Dental Bldg. South, 2nd floor, TEL: 03-5803-5406)
- (3) Lost property found in other places: Campus security and building safety
offices.

8) Health Service Center

(Health Service Center: TEL 03-5803 - 5081、<http://www.tmd.ac.jp/hsc/index.html>)

The Health Service Center aims to help students and faculty members stay healthy so that they can pursue their activities effectively. TMDU staff and students visit the center to get counseling for physical or mental issues, physical examinations, and letters of introduction necessary to visit specialists.

- (1) Health consultation and counseling for mental health
1. Health consultation is available from 10 a.m. to 12:30 p.m. and 1:30 p.m. to 3:30 p.m. on weekdays.
 2. For information concerning which doctors are available, please check the Health Administration Center website.
 3. You may consult with doctors or health consultants even after official consultation hours if they are still in the center.
 4. You may also freely use the center's scales to measure your height and weight, or the blood pressure machine.

(2) Health checkup

All students are obliged to complete a health checkup. It is the student's responsibility to check the Health Administration Center website for the detailed schedule of examinations.

- | | |
|--|-------------------|
| 1. Annual Health Checkup | May |
| 2. Detection of HBs Antigen | April |
| 3. Health Checkup for Radiation Workers | April and October |
| 4. Others: Immunization for Hepatitis B or Influenza bacilli | |

(3) Health certificate issuance

Health certificates can be issued when needed for taking a qualifying examination, applying for clinical training at a hospital, job hunting or entering a different school. Note that the certificate can only be issued to students who have taken the annual health checkup.

9) Student support

Support Center for Students and Female Staff:

(http://www.tmd.ac.jp/cmnn/stdc/index_en.html)

The Support Center for Students and Female Staff assists students with managing their daily life such as schoolwork and career planning, provides counseling for mental health issues and harassment, and promotes other student support activities. The center also implements plans for supporting research activities and work-life balance for both female and male researchers and graduate students.

If you have problems in your daily life as a student, you can talk to a counselor. Based upon your needs, choose the appropriate contact number below.

<For matters related to student life>

TEL : 03-5803-4959

(http://www.tmd.ac.jp/cgi-bin/stdc/cms_reserv.cgi?lang=en)

- Personal life: family, financial circumstances, relationship problems, etc.
- Schoolwork: progress in school, continued education, relationships with students or faculty
- Career planning: post-graduation decisions, job hunting
- Mental health: stress, unstable mental condition, interpersonal relationships

- Harassment: Academic dishonesty, power harassment, sexual harassment, etc.

<For matters related to student life or career support and work-life balance>

TEL: 03-5803-4921

(<http://www.tmd.ac.jp/ang/counsel/index.html>)

- Future career decisions and lifestyle
- Work-life balance and events such as pregnancy, childbirth and parenting
- Concerns about nursery schools or nursing care

☆Individual counseling: 10:30 a.m. to 5:00 p.m. on weekdays

Typically, you need to make a reservation for an individual counseling session. However, a counselor will try to respond to your request even when you do not have a reservation.

10) Graduate student lounge

Any graduate student can use the lounges located in M&D Tower on the 22nd and 14th floors.

<Available hours> 8:00 a.m. to 9:00 p.m.

<Notes>

1. Please keep the lounge tidy.
2. Please dispose of your garbage in your laboratory. Do not dispose of it in nearby classroom trashcans.
3. Please do not bother others. For example, avoid talking loudly, sleeping for too long, or bringing outside playthings to the lounge.
4. Please do not leave your belongings in the lounge.

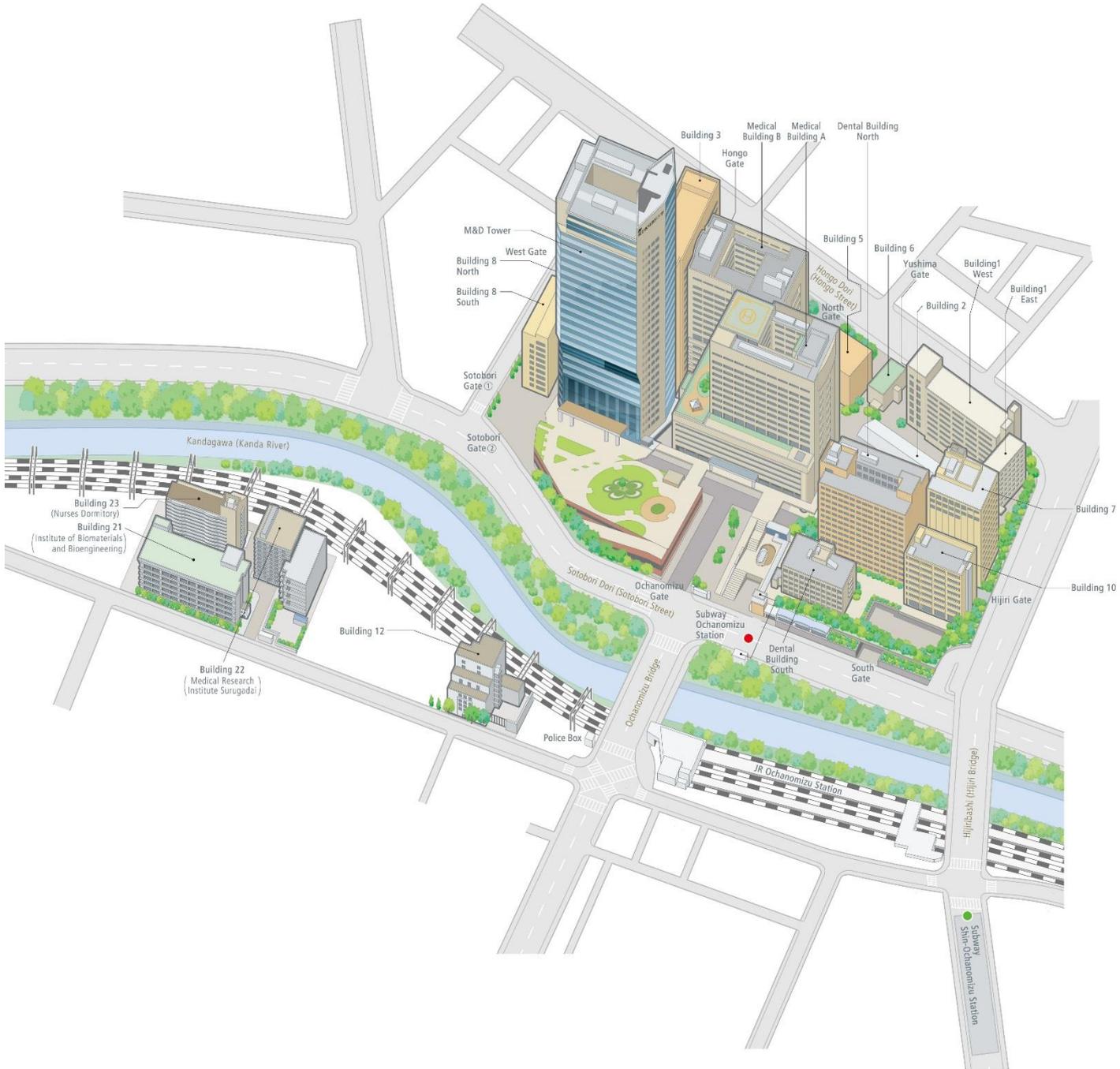
11) Others

- (1) If you plan to receive personal mail, please tell the sender to include the name of your department in the address field.
- (2) TMDU imposes traffic restrictions on campus and commuting by car is prohibited. However, an exception may be made for students who have difficulty commuting to campus by train or bus.
- (3) Relevant Offices
 1. Academic affairs:
JD & MPH Unit, International Exchange Section
(Bldg. 1, 4th floor, TEL 5803-4678)
 2. Payment of tuition:
Financial Planning Section (Bldg. 1, 3rd floor, TEL 5803-5048)
 3. Scholarships and tuition exemption:
Student Support Office (Bldg. 5, 3rd floor, TEL 5803-5077)

5. Major facilities

Facility name	Location	Extension number
International Exchange Section	Bldg. 1, 4F	4678 (JD & MPH Team)
Student Support Office	Bldg. 5, 3F	5077
Educational Planning Section	Bldg. 1, 1F	5074 (Thesis and Dissertation Unit) 4676,4679,4534 (Graduate Education Unit 1, 2)
Admission Section	Bldg. 1, 1F	4924
Financial Planning Section	Bldg. 1, 3F	5042
Library	M&D Tower, 3F	5592
Health Administration Center	Bldg. 5, 2F	5081
Student Lounge (Certificate Vending Machine)	Bldg. 5, 4F	—
University Co-op Cafeteria and shop	Bldg. 5, 1F, B1F	—
Research Center for Medical and Dental Sciences	Bldg. 8, North, South	5788

6. Campus/Access Map



Clinical Core Subject I (TMDU)

(Code: 4801, 1st year, 2 units)

(Course ID: GS-c4801-S)

1. Instructors

Name	Position	Department	Contact Information
TANABE Minoru	Chief Instructor / Professor	Department of Hepatobiliary and Pancreatic Surgery	tana.msrg@tmd.ac.jp
KINUGASA Yusuke	Professor	Department of Gastrointestinal Surgery	kinugasa.srg1@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
FUJII Yasuhisa	Professor	Department of Urology	y-fujii.uro@tmd.ac.jp
KUDO Toshifumi	Associate Professor	Department of Specialized Surgeries	t-kudo.srg1@tmd.ac.jp

2. Classroom/Lab Lecture Location

Designated by the instructor of each surgical clinical department.

3. Course Purpose and Outline

[Course Purpose]

For participants to obtain the most advanced knowledge and skills in each field of surgical medicine. For participants to acquire the knowledge needed to choose oncologically appropriate treatment and surgical techniques for cancers related to different organs.

[Outline]

Participate in clinical practice and conferences for each specialty field of surgical medicine.

4. Course Objectives

Participants will learn a number of new diagnostic and treatment methods in each specialty field of surgical medicine in order to enhance their clinical capabilities as a surgeon.

5. Format

The classes will be conducted in the form of seminars, conference presentations and discussions. Practical experience through actual cases will be obtained in operation rooms and other clinical situations.

6. Course Details

- In weekly seminars, participants will obtain the most current knowledge on advanced diagnosis, treatment and other topics in each specialty field of surgical medicine.
- In weekly conferences held before and after surgery, participants will learn standard practices and advanced treatments. They will make presentations on the cases they handled, and everyone's experience will be enhanced through Q&A sessions and discussions.
- In laboratories and outpatient departments, participants will experience standard practices and advanced treatments, after which they will write reports on their experiences.
- The participants will learn about the most advanced surgeries through operation room observation and other opportunities as often as possible, and write reports on the experiences to enhance their education.

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of classes will be made. It will comprise presentation of cases they have been assigned at conferences (50%) and Q&A and report assignments for cases they have experienced (50%).

8. Prerequisite Reading

When participating in each course, there are specific instructions on the reading that must be completed beforehand.

9. Reference Materials

Required literature etc. will be presented during course preparation. Participants are asked to prepare thoroughly.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: TANABE Minoru, Department of Hepatobiliary and Pancreatic Surgery

E-mail: tana.msrg@tmd.ac.jp

KINUGASA Yusuke, Department of Gastrointestinal Surgery

E-mail: kinugasa.srg1@tmd.ac.jp

ASAKAGE Takahiro, Department of Head and Neck Surgery

KUDO Toshifumi, Department of Specialized Surgeries

E-mail: t-kudo.srg1@tmd.ac.jp

E-mail: tasakage.hns@tmd.ac.jp

FUJII Yasuhisa, Department of Urology

E-mail: y-fujii.uro@tmd.ac.jp

Please contact individual instructors regarding questions or consultations.

12. Note(s) to Students

Since this subject is required, please be proactive in attending classes and learn through active participation.

Clinical Core Subject I (MU)

(Code: 4802, 1st year, 2 units)

(Course ID: GS-c4802-S)

1. Instructors

Name	Position	Department	Contact Information
Vitoon Chinswangwatanakul	Chief I/ Associate Professor	Division of General Surgery, Department of Surgery	vchinswa@gmail.com
Asada Methasate	Associate Professor	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Woramin Riansuwan	Associate Professor	Division of General Surgery, Department of Surgery	woramin.ria@mahidol.ac.th
Yongyut Sirivatanauksorn	Associate Professor	Division of General Surgery, Department of Surgery	yongyut.sir@mahidol.ac.th
Chumpol Wongwanit	Associate Professor	Division of Vascular Surgery, Department of Surgery	wchumpol@gmail.com
Suebwong Chutapisith	Associate Professor	Division of Head Neck and Beast, Department of Surgery	suebwong.chu@gmail.com
Sittiporn Srinualnud	Associate Professor	Division of Urology Surgery, Department of Surgery	Sitsrinualnad@yahoo.com

2. Classroom/Lab Lecture

Designated by each instructor

3. Course Purpose and Outline

[Course Purpose]

To have participants obtain most advanced knowledge and skills in each field of surgical medicine. To have participants acquire knowledge needed to choose oncologically appropriate treatment and surgical techniques for each organ cancer.

[Outline]

Participate in clinical practices and conferences for each specialty field of surgical medicine.

4. Course Objectives

The participants learn a number of new diagnostic and treatment methods in each specialty field of surgical medicine in order to enhance clinical capabilities as a surgeon.

5. Format

The classes will be conducted in forms of seminars, conference presentations, and discussions. Practical experience with actual cases is obtained in operation rooms and other clinical situations.

6. Class Details

- In weekly seminars, the participants will obtain most current knowledge on advanced diagnosis, treatment and other topics in each specialty field of surgical medicine.
- In weekly conferences held before and after a surgery, the participants will learn standard practices and advanced treatments. They make presentations on the cases they experienced and enhance experience through questions/answers and discussions.
- In laboratories and outpatient departments, the participants will experience standard practices

and advanced treatments, after which they will write reports on the experience.

- The participants will learn about most advanced surgeries through observation in the operation rooms and in other opportunities as often as possible and write reports on the experience to enhance their experience.

7. Assessment

Grades will be based on the following elements:

- Participation (50%)
- The contents of the assignment report and the presentation at the conference (50%)

8. Prerequisite Reading

When participating in each round, there are specific instructions on matters to prepare.

9. Reference Materials

Required literature etc. will be presented in preparation and prepare thoroughly.

10. Language used

All classes are given in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Vitoon Chinswangwatanakul, Division of General Surgery, Department of Surgery

E-mail: vchinswa@gmail.com

Asada Methasate, Division of General Surgery, Department of Surgery

E-mail: Asada.met@mahidol.ac.th

Woramin Riansuwan, Division of General Surgery, Department of Surgery

E-mail: woramin.ria@mahidol.ac.th

Yongyut Sirivatanauksom, Division of General Surgery, Department of Surgery

E-mail: yongyut.sir@mahidol.ac.th

Chumpol Wongwanit, Division of Vascular Surgery, Department of Surgery

E-mail: wchumpol@gmail.com

Suebwong Chutapisith, Division of Head Neck and Beast, Department of Surgery

E-mail: suebwong.chu@gmail.com

Sittipom Srinualnud, Division of Urology Surgery, Department of Surgery

E-mail: Sitsrinualnad@yahoo.com

12. Note(s) to Students

Since this subject is required to positively discuss and learn, etc., participate as much as possible.

Clinical Core Subject II

(Jointly Designed Subject)

(Code: 4803, 2nd – 4th year, 5 units)

(Course ID: GS-c4803-S)

1. Instructors

Name	Position	Department	Contact Information
TANABE Minoru	Chief Instructor/Professor	Department of Clinical Anatomy	tana.msrg@tmd.ac.jp
UETAKE Hiroyuki	Professor	Department of Specialized Surgeries	h-uetake.srg2@tmd.ac.jp
KINUGASA Yusuke	Professor	Department of Gastrointestinal Surgery	kinugasa.srg1@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
FUJII Yasuhisa	Professor	Department of Urology	y-fujii.uro@tmd.ac.jp
Vitoon Chinswangwatanakul	Chief Instructor/Associate Professor	Division of General Surgery, Department of Surgery	vchinswa@gmail.com
Asada Methasate	Associate Professor	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Woramin Riansuwan	Associate Professor	Division of General Surgery, Department of Surgery	woramin.ria@mahidol.ac.th
Yongyut Sirivatanauksorn	Associate Professor	Division of General Surgery, Department of Surgery	yongyut.sir@mahidol.ac.th
Chumpol Wongwanit	Associate Professor	Division of Vascular Surgery, Department of Surgery	wchumpol@gmail.com
Suebwong Chutapisith	Associate Professor	Division of Head Neck and Breast, Department of Surgery	suebwong.chu@gmail.com
Sittipom Srinualnud	Associate Professor	Division of Urology Surgery, Department of Surgery	Sitsrinualnad@yahoo.com

2. Classroom/Lab Lecture Location

Designated by the instructor of each surgical clinical department. This course is a cooperative opening course between TMDU and MU, and in this case, it is required to learn at a cooperative university for at least one semester (1 unit), and up to four semesters (4 units) in total.

3. Course Purpose and Outline

[Course Purpose]

For participants to obtain advanced knowledge and skills in each specialist field of surgical medicine, acquire basic/practical technologies and nurture an international perspective. Participants will also acquire the knowledge needed to choose appropriate treatment from an oncological point of view, and surgical techniques for cancers related to different organs.

[Outline]

Participate in clinical practices and conferences for each specialty field of surgical medicine.

4. Course Objectives

Participants will learn a number of new diagnostic and treatment methods in each specialty field of surgical medicine in order to enhance their clinical capabilities as surgeons.

5. Format

The classes will be conducted in the form of seminars, conference presentations and discussions. Practical experience through actual cases will be obtained in operation rooms and other clinical situations.

6. Course Details

- In weekly seminars, participants will obtain the most current knowledge on advanced diagnosis, treatment and other topics in each specialty field of surgical medicine not only those in his/her own country but also those in the country of the partnership university.
- In weekly conferences held before and after a surgery, participants will learn standard practices and advanced treatments. They will make presentations on the cases they experienced, and everyone's experience will be enhanced through Q&A sessions and discussions.
- In laboratories and outpatient departments, participants will experience standard practices and advanced treatments, not only those in his/her own country but also those in the country of the partnership university, after which they will write reports on their experiences.
- Participants will learn about the most advanced surgeries, not only those in his/her own country but also those in the country of the partnership university, through operation room observation and other opportunities as often as possible, and write reports on their experiences to enhance their education.

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of classes will be made. It will comprise presentation of cases they have been assigned at conferences (50%) and Q&A and reporting assignments for cases they have experienced (50%).

8. Prerequisite Reading

When participating in each course, there are specific instructions on the reading that must be completed beforehand.

9. Reference Materials

Required literature etc. will be presented during course preparation. Participants are asked to prepare thoroughly.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: TANABE Minoru, Department of Hepatobiliary and Pancreatic Surgery

E-mail: tana.msrg@tmd.ac.jp

UETAKE Hiroyuki, Department of Specialized Surgeries

E-mail: h-uetake.srg2@tmd.ac.jp

KINUGASA Yusuke, Department of Gastrointestinal Surgery

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ASAKAGE Takahiro, Department of Head and Neck Surgery

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FUJII Yasuhisa, Department of Urology

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Suebwong Chutapisith, Division of Head Neck and Beast, Department of Surgery

E-mail: suebwong.chu@gmail.com

Sittipom Srinualnud, Division of Urology Surgery, Department of Surgery

E-mail: Sitsrinualnad@yahoo.com

Please contact individual instructors regarding questions or consultations.

12. Note(s) to Students

It is required to learn at a cooperative university for at least one semester (1 unit), and up to four semesters (4 units) in total.

4803 Clinical Core Subject II

(Jointly Designed Subject)

(Code: 4803, 2nd – 4th year, 5 units)

(Course ID: GS-c4803-S)

1. Instructors

Name	Position	Department	Contact Information
TANABE Minoru	Chief Instructor/ Professor	Department of Hepatobiliary and Pancreatic Surgery	tana.msrg@tmd.ac.jp
KINUGASA Yusuke	Professor	Department of Gastrointestinal Surgery	kinugasa.srg1@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
FUJII Yasuhisa	Professor	Department of Urology	y-fujii.uro@tmd.ac.jp
KUDO Toshifumi	Associate Professor	Department of Specialized Surgeries	t-kudo.srg1@tmd.ac.jp
Vitoon Chinswangwatanakul	Chief Instructor/Associate Professor	Division of General Surgery, Department of Surgery	Vitoon.chi@mahidol.ac.th
Asada Methasate	Associate Professor Dr.	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Chongdee Aojanepong	Associate Professor	Division of Plastic Surgery, Department of Surgery	Chongdee.aoj@mahidol.ac.th
Chumpol Wongwanit	Associate Professor	Division of Vascular Surgery, Department of Surgery	Chumpol.won@mahidol.ac.th
Suebwong Chutapisith	Associate Professor Dr.	Division of Head Neck and Neck, Department of Surgery	suebwong.chu@mahidol.ac.th
Nuttawut Sermsathanasawadi	Associate Professor Dr.	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th

2. Classroom/Lab Lecture Location

Designated by the instructor of each surgical clinical department. This course is a cooperative opening course between TMDU and MU, and in this case, it is required to learn at a cooperative university for at least one semester (1 unit), and up to four semesters (4 units) in total.

3. Course Purpose and Outline

[Course Purpose]

For participants to obtain advanced knowledge and skills in each specialist field of surgical medicine, acquire basic/practical technologies and nurture an international perspective.

Participants will also acquire the knowledge needed to choose appropriate treatment from an oncological point of view, and surgical techniques for cancers related to different organs.

[Outline]

Participate in clinical practices and conferences for each specialty field of surgical medicine.

4. Course Objectives

Participants will learn a number of new diagnostic and treatment methods in each specialty field of surgical medicine in order to enhance their clinical capabilities as surgeons.

5. Format

The classes will be conducted in the form of seminars, conference presentations and discussions. Practical experience through actual cases will be obtained in operation rooms and other clinical situations.

6. Course Details

- In weekly seminars, participants will obtain the most current knowledge on advanced diagnosis, treatment and other topics in each specialty field of surgical medicine not only those in his/her own country but also those in the country of the partnership university.
- In weekly conferences held before and after a surgery, participants will learn standard practices and advanced treatments. They will make presentations on the cases they experienced, and everyone's experience will be enhanced through Q&A sessions and discussions.
- In laboratories and outpatient departments, participants will experience standard practices and advanced treatments, not only those in his/her own country but also those in the country of the partnership university, after which they will write reports on their experiences.
- Participants will learn about the most advanced surgeries, not only those in his/her own country but also those in the country of the partnership university, through operation room observation and other opportunities as often as possible, and write reports on their experiences to enhance their education.

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of classes will be made. It will comprise presentation of cases they have been assigned at conferences (50%) and Q&A and reporting assignments for cases they have experienced (50%).

8. Prerequisite Reading

When participating in each course, there are specific instructions on the reading that must be completed beforehand.

9. Reference Materials

Required literature etc. will be presented during course preparation. Participants are asked to prepare thoroughly.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: TANABE Minoru, Department of Hepatobiliary and Pancreatic Surgery

E-mail: tana.msrg@tmd.ac.jp

KINUGASA Yusuke, Department of Gastrointestinal Surgery

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Vitton Chinswangwatanakul, Division of General Surgery, Department of Surgery

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Asada Methasate, MIS unit, Division of General Surgery, Department of Surgery

E-mail: Asada.met@mahidol.ac.th

Chumpol Wongwanit, Division of Vascular Surgery, Department of Surgery

E-mail: wchumpol@gmail.com

Suebwong Chutapisith, Division of Head Neck and Beast, Department of Surgery

E-mail: Suebwong.chu@gmail.com

Please contact individual instructors regarding questions or consultations.

12. Note(s) to Students

It is required to learn at a cooperative university for at least one semester (1 unit), and up to four semesters (4 units) in total.

Organ-specialized Cancer

(Code: 4823, 1st – 2nd year, 1 unit)
(Course ID: GS-c4823-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor /Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
KAWADA Kenro	Junior Associate Professor	Department of Gastrointestinal Surgery	kawada.srg1@tmd.ac.jp
NAKAGAWA Tsuyoshi	Junior Associate Professor	Department of Specialized Surgeries	nakagawa.srg2@tmd.ac.jp
SATO Yuya	Assistant Professor	Department of Gastrointestinal Surgery	yusatoh.srg1@tmd.ac.jp
WAKANA Kimio	Junior Associate Professor	Hospital Department of Perinatal and Women's Medicine	k.wakana.crm@tmd.ac.jp

2. Classroom/Lab Lecture Location

Zoom

3. Course Purpose and Outline

[Course Purpose]

To understand the principle and practice of standard and multidisciplinary treatment for organ-specialized cancer.

[Outline]

The classification, pathology and diagnosis of organ-specialized cancer will be outlined. Surgery and chemotherapy, as well as a combination of both as multidisciplinary treatment will be explained in detail, alongside the indication, target and benefit of such treatments. In addition, recent clinical studies and topics also will be covered.

4. Course Objectives

- To understand and be able to explain information on diagnosis and treatment for organ-specialized cancer.
- To understand and be able to explain the current status of multidisciplinary diagnosis and treatment for organ-specialized cancer.

- To understand and be able to explain the role of diagnosis and treatment for organ-specialized cancer in comprehensive cancer diagnosis and treatment.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

- A diagnosis and treatment of cancers of any organ (esophagus, stomach, mammary gland, urinary and gynecologic organs) will be outlined.
- This course is organized together alongside the course on “Pediatric and Rare Cancers.”

No.	Topics
1	Urological cancer (1)
2	Urological cancer (2)
3	Gynecologic cancer (uterine, ovarian) (1)
4	Gynecologic cancer (uterine, ovarian) (2)
5	Breast cancer (1)
6	Breast cancer (2)
7	Lung cancer specifics (internal medicine) (1)
8	Lung cancer specifics (internal medicine) (2)
9	Gastric cancer (1)
10	Gastric cancer (2)

Schedule (ALL First Period)

Date	Local Time (Time in Thailand)	Instructors
Sep. 28	18:30~19:50 (16:30~17:50)	ASAKAGE Takahiro
Sep. 29	18:30~19:50 (16:30~17:50)	HONDA Takayuki
Sep. 30	18:30~19:50 (16:30~17:50)	NAKAGAWA Tsuyoshi
Oct. 1	18:30~19:50 (16:30~17:50)	KAWADA Kenro
Oct. 5	18:30~19:50 (16:30~17:50)	ISHIKAWA Yoshiya
Oct. 6	18:30~19:50 (16:30~17:50)	WAKANA Kimio
Oct. 7	18:30~19:50 (16:30~17:50)	FUKUDA Shohei
Oct. 8	18:30~19:50 (16:30~17:50)	SATO Yuya

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the participant's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and reporting assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with “Pediatric and Rare Cancers” and “Advanced Clinical Oncology.”

It is expected that anyone who is interested in the field of oncology will participate actively.

Overview of Public Health Medicine in Disease Prevention

(Code : 4810 1st – 2nd year, 2 units)

(Course ID: GS-c4810-L)

1. Instructors

Name	Position	Department	Contact Information
NAKAMURA Keiko	Chief Instructor / Professor	Department of Global Health Entrepreneurship	nakamura.ith@tmd.ac.jp
AKITA Keiichi	Professor	Department of Clinical Anatomy	akita.fana@tmd.ac.jp
YAMAOKA Shoji	Professor	Department of Molecular Virology	shojmmb@tmd.ac.jp
FUJIWARA Takeo	Professor	Department of Global Health Promotion	fujiwara.hlth@tmd.ac.jp
TAKADA Kazuki	Professor	Professional Development in Health Sciences	takada.rheu@tmd.ac.jp
SEINO Kaoruko	Junior Associate Professor	Department of Global Health Entrepreneurship	seino.ith@tmd.ac.jp
OKADA Takuya	Junior Associate Professor	Department of Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
ITO Takashi	Assistant Professor	Department of Human Pathology	t.ito.pth1@tmd.ac.jp

2. Classroom/Lab Lecture Location

Please confirm the location by contacting your respective instructors before attendance.

3. Course Purpose and Outline

This course offers a general introduction to public health medicine, addressing fundamental topics and basic measures required for a global leader in disease prevention and data science medicine. The course focuses on development of essential knowledge and skills for global disease prevention and implementation science through lectures and discussions based on select case studies.

4. Course Objectives

At the end of the course, participants will be able to:

- Describe the roles and responsibilities of public health in disease prevention
- Describe development in basic, clinical, and public health research using data science
- Describe theory and application of implementation medical science
- Describe the global distribution and causes of major diseases, injuries and health risk factors, and the main prevention and control strategies
- Describe and apply the basic principles and methods of medical research to disease prevention
- Describe the main ethical issues in international medical research
- Describe cross-border health issues in relation to globalization

5. Format

All programs are conducted in English in an omnibus format.

The course will be conducted through lectures, group discussions and team projects.

International students and Japanese students will attend the same course.

6. Course Details

No	Topics
1	Implementation medical science in the context of global health (1)
2	Implementation medical science in the context of global health (2)
3	Prevention and control of communicable disease (1)
4	Prevention and control of communicable diseases (2)
5	Prevention and control of tropical diseases (1)
6	Prevention and control of tropical diseases (2)
7	Health promotion (1)
8	Health promotion (2)
9	Prevention and control of non-communicable diseases and implementation science (1)
10	Prevention and control of non-communicable diseases and implementation science (2)
11	Prevention and control of cancer (1)
12	Prevention and control of cancer (2)
13	Leadership (1)
14	Leadership (2)
15	History of Anatomy and Body donation (1)
16	History of Anatomy and Body donation (2)

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the student's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and report assignments (40%). If the course is taken through E-learning (live streaming and video viewing), there will be a confirmation exam after the coursework is completed (also video viewing through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read the materials beforehand.

9. Reference Materials

To be announced before or during individual classes, when relevant.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: NAKAMURA Keiko, Department of Global Health Entrepreneurship

E-mail: nakamura.ith@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Both international and Japanese students participate in this program, provided in English, and learn together about public health medicine in disease prevention. The course is a core part of nurturing global leaders in the disease prevention and data science medical research that TMDU provides.

Epidemiology

(Code: 4811 1st – 2nd year, 2 units)
(Course ID: GS-c4811-L)

1. Instructors

Name	Position	Department	Contact Information
FUJIWARA Takeo	Chief Instructor / Professor	Department of Global Health Promotion	fujiiwara.hlth@tmd.ac.jp
MORITA Ayako	Junior Associate Professor	Department of Global Health Promotion	morita.hlth@tmd.ac.jp
MATSUYAMA Yusuke	Assistant Professor	Department of Global Health Promotion	matsuyama.hlth@tmd.ac.jp

2. Classroom/Lab Lecture Location

G-Lab, M&D Tower 8F

3. Course purpose and Outline

Course Purpose

This course introduces the principles and methods used in epidemiologic research.

Outline

This course is a lesson to learn the basics of the Clinical Statistics and Bioinformatics Graduate Program of the Integrative Biomedical Sciences Programs for Preemptive Medicine aiming at the training of personnel who can promote precision medicine.

Epidemiology is defined as the study of the causes and distribution of health-related states or events in specified populations, and the application of this knowledge to control those health problems.

Throughout the course we will focus on conceptual and practical issues in the design, conduct, and analysis of epidemiologic studies for description and causal inference.

4. Course Objectives

By the end of this course, students will be able to:

- Describe and calculate measures of disease frequency and measures of effect.
- Explain main types of epidemiologic study, and discuss appropriate design to use in a given situation.
- Explain potential biases in epidemiologic study and how to deal with these biases, and control confounding by stratifying data.
- Explain how epidemiology can be applied to evaluate health policy, investigate infectious diseases and genetic factors with examples.

5. Format

This course will consist of lectures and case-based class activities. Students will be required to write a final report.

6. Course Details

No.	Topics
1	Case and group activity: Measurement (Watch videos relevant to lecture prior to the session) (1)
2	Case and group activity: Measurement (Watch videos relevant to lecture prior to the session) (2)
3	On- demand and self-study (Study design and confounding) (Watch videos relevant to lecture) (1)
4	On- demand and self-study (Study design and confounding) (Watch videos relevant to lecture) (2)
5	Case and group activity: Measurement (Presentation)
6	Case and group activity: Critical appraisal (Presentation)
7	On- demand and self-study (Watch videos relevant to lecture) (1)
8	On- demand and self-study (Watch videos relevant to lecture) (2)
9	Case and group activity: Data analysis (1)
10	Case and group activity: Data analysis (2)
11	Case and group activity: Q&A session (1)
12	Case and group activity: Q&A session (2)
13	Case and group activity: Data analysis (Presentation) (1)
14	Case and group activity: Data analysis (Presentation) (2)
15	Exam
16	Exam review

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the student's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and report assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

Reading materials will be available online through the course webpage. Students are expected to have worked through the materials before attending the corresponding class.

9. Reference Materials

Gordis L. Epidemiology: with student consult. 5th edition. Philadelphia: Elsevier; 2013

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: FUJIWARA Takeo, Department of Global Health Promotion

E-mail: fujiwara.hlth@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Permission from the chief instructor is required in order to register for this course.

Clinical Biostatistics and Statistical Genetics

(Code: 4812 1st – 2nd year, 2 units)

(Course ID: GS-c4812-L)

1. Instructors

Name	Position	Department	Contact Information
TAKAHASHI Kunihiko	Chief Instructor / Professor	Department of Biostatistics	kunihikot.dsc@tmd.ac.jp

2. Classroom/Lab Lecture Location

Via Zoom

3. Course Purpose and Outline

Course Purpose:

This course introduces the basic techniques important for analyzing data from epidemiologic, biomedical and other public health related research. Statistical reasoning will be emphasized through problem solving and practical applications.

Outline:

Biostatistics is the application of statistical methods to data in biological, biomedical and health sciences. It is a key technique for the collection, analysis, and presentation of data especially in quantitative studies including epidemiological studies. Throughout the seminar, we will review the broad field of statistical data analysis and the range of issues that arise when analyzing health data. We will read and discuss selected chapters from a textbook and apply statistical methods to wide range of quantitative study questions.

4. Course Objectives

By the end of this course, students will be able to:

- Interpret basic statistical terminologies.
- Explain assumptions and conditions for basic statistical techniques, and judge which statistical technique to use in a given situation.
- Conduct basic statistical techniques both by hand and using a statistical software, and present results using publication quality tables.
- Describe results of statistical analysis using standard statistical expressions.

5. Format

This course will consist of lectures and optional laboratory sessions. There will be daily homework assignments and an examination on the final day.

6. Course Details

No.	Topics
1	Lecture: Introduction to Biostatistics (1)
2	Lecture: Data presentation; Numerical summary measures (1)
3	Lecture: Data presentation; Numerical summary measures (2)
4	Lecture: Probability and Theoretical probability distributions (1)
5	Lecture: Probability and Theoretical probability distributions (2)
6	Lecture: Sampling distribution of the mean; Confidence intervals
7	Lecture: Hypothesis testing; Comparison of two means (1)
8	Lecture: Hypothesis testing; Comparison of two means (2)
9	Lecture: Analysis of Variance; Nonparametric methods (1)
10	Lecture: Analysis of Variance; Nonparametric methods (2)
11	Lecture: Inference on proportions; Contingency tables; Multiple 2 by 2 tables (1)
12	Lecture: Inference on proportions; Contingency tables; Multiple 2 by 2 tables (2)
13	Lecture: Correlation; Simple linear regression; Multiple regression (1)
14	Lecture: Correlation; Simple linear regression; Multiple regression (2)
15	Lecture: Logistic regression
16	Final Exam

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the student's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and reporting assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

Reading materials will be available online through the course webpage. Students are expected to have worked thorough the materials before attending the corresponding class.

9. Reference Materials

Pagano M, Gauvreau K. Principles of Biostatistics. 2nd ed. Belmont: Brooks/Cole; 2000.
Rosner B. Fundamentals of Biostatistics. 8th ed. Brooks/Cole; 2015.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: TAKAHASHI Kuniyiko, Department of Biostatistics

E-mail: biostat.dsc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Permission from the chief instructor is required in order to register for this course.

This course uses the statistical software Stata. Stata is available for each student during the course.

Students are expected to perform basic algebra, including logarithms and exponentials, by hand or using a calculator.

SISR 620 (4813) Research Methodology in Biomedicine

(Code : 4813 1st ~2nd year 2units)
(Course ID: GS-c4813-L)

1. Instructors

Name	Position	Department	Contact Information
Cherdsak Iramaneerat	Chief Instructor /Associate Professor Dr.	Division of General Surgery, Department of Surgery	Cherdsak.ira@mahidol.ac.th
Yodying Dangprapai	Instructor	Department of Physiology	Yodying.dan@mahidol.ac.th
Varut Lohsiriwat	Professor Dr.	Division of General Surgery, Department of Surgery	balloon@hotmail.com Varut.loh@mahidol.ac.th
Thasaneeya Nopparatjamjomras	Assistant Professor	Siriraj Health science education excellence center	Thasaneeya.rat@mahidol.ac.th

2. Classroom/Lab Lecture Location

Lecture
Meeting room of the Division of General surgery
Syamindra bld, 12th fl.
Faculty of Medicine Siriraj Hospital
Zoom cloud meeting system
Googole meet system
SelecX system

3. Course Purpose and Outline

General introduction of medical research principles and various research methods used to address research problems in medical services

4. Course objectives

By the end of the course, participants will be able to:

- 1) Describe basic principles of medical research
- 2) Develop proper research questions and hypotheses
- 3) Explain basic principles of research ethics
- 4) Choose appropriate research design to address a research question of interest
- 5) Develop a research proposal

5. Format

Lectures, group discussion, report presentation
All programs will be conducted in English.

6. Course Details

Philosophical foundations of research, research questions, research hypotheses, ethical issues in research, population and sample, validity, research proposal, descriptive study, experimental research, basic science research, case-control study, cohort study, correlational research, survival analysis, survey research, quantitative data analysis, qualitative research, qualitative data collection, qualitative data analysis

Class schedule

NO.	Date	Time	Topic/Details	Instructors
1	Mon, May 17, 2021	16.00 – 18.00	Introduction, Philosophical foundations of research, research questions and hypotheses	Assoc. Prof. Dr. Cherdasak Iramaneerat
2	Wed, May 19, 2021	14.30 - 16.30	Experimental research	Prof. Dr. Varut Lohsiriwat
3	Thurs, May 20, 2021	16.00 -18.00	Research ethics, Research proposal	Assoc. Prof. Dr. Cherdasak Iramaneerat
4	Mon, May 24, 2021	16.00 – 18.00	Population and sample, Internal and external Validity	Assoc. Prof. Dr. Cherdasak Iramaneerat
5	Fri, May 28, 2021	14.30 – 16.30	Case-control study, Cohort study	Prof. Dr. Varut Lohsiriwat
6	Mon, May 31, 2021	16.00 – 18.00	Descriptive research, Quality of life	Assoc. Prof. Dr. Cherdasak Iramaneerat
7	Wed, Jun 9, 2021	14.30 – 16.30	Survival analysis	Prof. Varut Lohsiriwat
8	Thurs, Jun 10, 2021	15.00 – 17.00	Basic science research	Instructor Yodying Dangprapai
9	Mon, Jun 21, 2021	16.00 – 18.00	Correlation research	Assoc. Prof. Dr. Cherdasak Iramaneerat
10	Mon, Jun 28, 2021	16.00 - 18.00	Survey research	Assoc. Prof. Dr. Cherdasak Iramaneerat
11	Mon, Jul 5, 2021	17.00 – 19.00	Quantitative data analysis	Assoc. Prof. Dr. Cherdasak Iramaneerat
12	Mon, Jul 12, 2021	15.00 – 17.00	Qualitative research	Assis. Prof. Thasaneeya Nopparatjamjomras
13	Mon, Jul 19, 2021	16.00 – 18.00	Data collection techniques in qualitative research	Assis. Prof. Thasaneeya Nopparatjamjomras
14	Mon, Aug 2, 2021	15.00 – 17.00	Qualitative data analysis	Assis. Prof. Thasaneeya Nopparatjamjomras
15	Wed, Sep 15, 2021	16.00 – 18.00	Student presentation	Assoc. Prof. Dr. Cherdasak Iramaneerat
16	Wed, Sep 22, 2021	16.00 – 17.00	Examination	Assoc. Prof. Dr. Cherdasak Iramaneerat

All scheduled class will be taught at a meeting room of division of general surgery, Department of Surgery, Syamindra bld. 12th fl., Faculty of Medicine Siriraj Hospital

7. Assessment

Scoring

- | | |
|------------------------|-----------|
| 1. Class participation | 10 points |
| 2. Group discussion | 20 points |
| 3. Report | 40 points |
| - Written report | 20 points |
| - Class presentation | 20 points |
| 4. Examination | 30 points |

Criterion-reference grading

- A = 80 points or more
- B+ = 70 - 79.99 points
- B = 60 - 69.99 points
- C = 50 - 59.99 points
- D = 40 - 49.99 points
- F = 0 - 39.99 points

Class participation

Class participation is evaluated based on punctuality and students' participation in class activities in every class.

Each late attendance will result in a deduction of one point.

Each class absence will result in a deduction of two points.

Late attendance of more than 20 minutes is counted as absence.

Group discussion

In each class, an instructor will observe the discussion. At the end of each class, an instructor will give an ordinal rating of the quantity and quality of discussion of each student (1 = poor, 2= fair, 3= average, 4 = good, and 5 = excellent). The scores obtained from all sessions will be averaged into an individual's discussion score which has a total of 20 points.

Report

Each student writes and presents two reports:

Report 1: Surgical research critical review

Each student conducts a literature search from an online database to find a high quality surgical research published within ten years in an international journal (using English language) and critically reviews the study.

The score of report 1 comes from two sources

1.) Written report 10 points

The written report comprises of two files

a. MS word file: A student's critical review of the study

This report is printed in MS word format using Times New Roman font size 12 points on A4 paper with margins on all sides of 2.5 cm. The report is printed in single space format. The length of this report must not exceed five pages. The report contains the following elements:

- A short summary of the selected research report
- Critical appraisal of the research: Introduction, Methods, Results, Discussion, Conclusion
- How the student search for the study and why the student selects this study for report
- How the student plan to apply the knowledge obtained from the selected study in real life practice

b. PDF file of the published research under review

Both files must be submitted via email to cherdsakiramaneerat@gmail.com at least 3 days prior to oral presentation

2.) Class presentation 10 points

Each student presents their work orally in front of the classroom on Sep 24, 2020.

The content of this presentation covers all four main elements written in the submitted report.

Each student must give oral presentation in 15 minutes. There will be 5 minutes for Q&A after the presentation.

Criteria for evaluation of oral presentation

- Understanding of the research study
- Thoughtful application of the research findings
- Oral presentation skill within time limit
- Proper use of presentation media (PowerPoint)

Report 2: Surgical research proposal

Each student writes a research proposal

The score of report 2 comes from two sources

1.) Written report 10 points

This report is printed in MS Word format using Times New Roman font size 12 points on A4 paper with margins on all sides of 2.5 cm. This report is printed in single space format. The length of this report must not exceed five pages. This report contains the following elements:

- Research title
- Background and short literature review
- Purposes of the study
- Research question
- Population and sample
- Research design
- Research instrument
- Data collection and analysis plan

The report must be submitted via email to cherdsakiramaneerat@gmail.com at least 3 days prior to oral presentation

2.) Class presentation 10 points

Each student presents their work orally in front of the classroom on Sep 24, 2020. The content of this presentation covers all elements written in the submitted report. Each student must give oral presentation in 15 minutes. There will be 5 minutes for Q&A after the presentation.

Criteria for evaluation of oral presentation

- Understanding of the research principles
- Oral presentation skill within time limit
- Proper use of presentation media (PowerPoint)

Examination

A closed book final exam using 60 items of multiple-choice questions (one-best response items)

- Exam date: Wed, Sep 22, 2021
- From 4 – 5 PM
- Total 60 items
- Time 60 min

8. Prerequisite Reading

This course will be taught using four textbooks

Book 1: Bowling A. Research methods in health: Investigating health and health services, 4th ed. Berkshire: McGraw Hill Open University Press; 2014.

Book 2: Ross T. A survival guide for health research methods. Berkshire: McGraw Hill Open University Press; 2012.

Book 3: Morgan GA, Gliner JA, Harmon RJ. Understanding and evaluating research in applied and clinical settings. Mahwah, NJ: Lawrence Erlbaum Associates; 2006.

Book 4: Hammond FM, Malec JF, Nick TG, Buschbacher RM. Handbook for clinical research: Design, statistics, and implementation. New York, NY: Demos medical publishing; 2015.

These four textbooks are available in an eBook format, which can be downloaded from Mahidol University eBook collection.

Session 1: Introduction, Philosophical foundations of research, research questions and hypotheses

Book 1: Chapter 7: The principles of research

Book 3: Chapter 2: Definition, purposes, and dimensions of research

Book 3: Chapter 3: A tale of two paradigms: Quantitative and qualitative

Session 2: Research ethics, research proposal

Book 2: Chapter 8: Ethics in research

Book 3: Chapter 4: Ethical problems and principles in human research

Book 3: Chapter 5: Ethical issues related to publishing and reviewing

Attard N. WASP (Write a scientific paper): Writing an academic research proposal. Early Human Development 2018; 123: 39-41.

Session 3: Population and sample, internal and external validity

Book 1: Chapter 8: Sample size and sampling for quantitative and qualitative research

Book 3: Chapter 17: Internal validity

Book 3: Chapter 18: Sampling and population external validity

Book 3: Chapter 19: Evaluating the validity of a research study: An introduction

Session 4: Descriptive research, Quality of life

Book 1: Chapter 3: Quality of life: concepts, measurements and patient perception

Book 2: Chapter 4: Analysis of quantitative data

Session 5: Experimental research

Book 1: Chapter 10: Quantitative research: experiments and other analytic methods of investigation

Book 3: Chapter 13: Quasi-experimental designs

Book 3: Chapter 14: Randomized experimental designs

Session 6: Basic science research

Kaelin WG. Common pitfalls in preclinical cancer target validation. *Nat Rev Cancer*. 2017 Jul;17(7): 425-440

Session 7: Case-control and cohort study

Book 4: Chapter 5: observational studies: Retrospective versus prospective

Song JW, Chung KC. Observational studies: Cohort and case-control studies. *Plast Reconstr Surg* 2010; 126(6): 2234 – 2242.

Session 8: Correlation research

Book 3: Chapter 26: Basic associational designs: Analysis and interpretation

Book 3: Chapter 30: Use and interpretation of multiple regression

Book 3: Chapter 31: Logistic regression and discriminant analysis: use and interpretation

Session 9: Survival analysis

Book 4: Chapter 40: Kaplan-Meier estimator

Session 10: Survey research

Book 1: Chapter 9: Quantitative research: surveys

Book 1: Chapter 13: Questionnaire design

Session 11: Quantitative data analysis

Book 1: Chapter 15: Preparation of quantitative data for coding and analysis

Book 3: Chapter 23: Selection of inferential statistics: An overview

Book 3: Chapter 24: Single-factor between-groups designs: analysis and interpretation

Book 3: Chapter 25: Single-factor repeated-measures designs: analysis and interpretation

Book 3: Chapter 27: The chi-square test and accompanying effect size indices

Session 12: Qualitative research

Book 2: Chapter 5: Qualitative research

Session 13: Data collection techniques in qualitative research

Book 1: Chapter 16: Unstructured and structured observational studies

Book 1: Chapter 17: Unstructured interviewing

Book 1: Chapter 18: Focus group

Session 14: Qualitative data analysis

Book 2: Chapter 6: Qualitative analysis

Session 15: Student presentation

None

9. Reference Materials

To be announced before individual classes

10. Language used

All classes are conducted in English.

11. Office Hours

Please contact Associate Professor Dr. Cherdsak Iramaneerat
(Cherdsak.ira@mahidol.ac.th)

12. Note(s) to Students

None.

SISR 621 (4814) Biostatistics in Biomedicine

(Code: 4814, 1st~2nd year, 2 units)

(Course ID: GS-c4814-L)

1. Instructors

Name	Position	Department	Contact Information
Chutwichai Tovikkai	Chief Instructor/ Associate Professor Dr.	Division of General Surgery, Department of Surgery	chutwichai.tov@mahidol.ac.th
Varut Lohsiriwat	Professor Dr.	Division of General Surgery, Department of Surgery	Varut.Loh@mahidol.ac.th
Asada Methasate	Associate Professor Dr.	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Cherdsak Iramaneerat	Associate Professor Dr.	Division of General Surgery, Department of Surgery	Cherdsak.ira@mahidol.ac.th
Chulaluk Komoltri	Assistant Professor	Division of Research centre	Chulaluk.kom@mahidol.ac.th

2. Classroom/Lab Lecture Location

Lecture: Udomposakrisna lecture room, 12th floor Syamindra Building, Siriraj Hospital

Computer lab: Computer lab, 6th floor Srisawarinthira Building, Siriraj Hospital
Zoom Cloud Meeting System

3. Course Purpose and Outline

The objectives are to provide students with an introduction to:

- basic knowledge of statistics, including essential statistical tests, basic descriptive and analytic statistics
- applying appropriate statistics to research questions
- the roles of database, spreadsheet and statistical software programs in analyzing clinical research data

- using statistical software programs to input, clean, manage, describe and analyze clinical research data
- applying these skills in analyzing students' own research project

4. Course objectives

This course offers a general overview of biostatistics for surgeon researchers, including basic knowledge of statistics, how to use database, spreadsheet and statistical software programs. Students will learn about hypothesis, essential statistical tests, basic descriptive and analytic statistics. The course will provide an introduction to the use of commonly used statistical software programs.

5. Format

Lecture and computer labs.

6. Course Details

Course timetable

Date: to be announced.

N O	Date	Time	Topic/Details	Instructors
1	12 Jan 2021	14.00- 16.00	Introduction to biostatistics, Introduction to statistical programs	Associate Professor Dr. Chutwichai Tovikkai
2	19 Jan 2021	14.00- 17.00	Data type and data management	Associate Professor Dr. Chutwichai Tovikkai

3	26 Jan 2021	14.00- 17.00	Descriptive statistics	Associate Professor Dr. Chutwichai Tovikkai
4	2 Feb 2021	14.00- 17.00	Statistical hypothesis tests, t- test, ANOVA	Associate Professor Dr. Asada Methasate
5	9 Feb 2021	14.00- 17.00	Non-parametric test	Associate Professor Dr. Cherdak Iramaneera
6	16 Feb 2021	14.00- 17.00	Linear regression & correlation	Associate Professor Dr. Cherdak Iramaneera
7	23 Feb 2021	14.00- 17.00	Binary Logistic regression	Assistant Professor Dr. Chulaluk Komoltri
8	2 Mar 2021	14.00- 17.00	Survival analysis & Cox regression	Professor Dr. Varut Lohsiriwat
9	9 Mar 2021	14.00- 17.00	Sample size calculation	Assistant Professor Chulaluk Komoltri

10	16 Mar 2021	14.00- 17.00	Creating graphs and tables	Assistant Professor Chulaluk Komoltri
11	23 Mar 2021	14.00- 17.00	Special consideration: missing data, multiple imputation, propensity score matching	Assistant Professor Chulaluk Komoltri
			Examination	Associate Professor Dr. Chutwichai Tovikkai

Course timetable Total 30 hours

Class content will include lecture and computer lab per sessions

7. Assessment

Grades are based on attendance at lecture, performances on assignments, and level of attitude, skill and knowledge.

8. Prerequisite Reading

When reading materials are distributed or specified in advance, students are expected to read those materials beforehand.

9. Reference Materials

To be announced before or during individual classes

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Dr. Chutwichai Tovikkai,

Division of General Surgery, Department of Surgery
E-mail: chutwichai.tov@mahidol.ac.th Tel: +662-419-8005
Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

Overview of Cancer: Cancer Biology, Pathology and Anatomy

(Code : 4820 1st – 2nd year, 1 unit)
(Course ID: GS-c4820-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
HATA Yutaka	Professor	Department of Medical Biochemistry	yuhammch@tmd.ac.jp
AKITA Keiichi	Professor	Department of Clinical Anatomy	akita.fana@tmd.ac.jp
AKIYAMA Yoshimitsu	Junior Associate Professor	Department of Molecular Oncology	yakiyama.monc@tmd.ac.jp
KOBAYASHI Daisuke	Assistant Professor	Department of Human Pathology	d-koba.pth1@tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

- To understand the genetic abnormalities underlying cancer.
- To understand carcinogens, infections associated with canceration and hereditary cancers.
- To understand factors regulating differentiation associated with cancer and differentiation therapy.
- To understand the association between cancer and vasculature and angiogenesis inhibition therapy.
- To understand cell death/life span, cell proliferation/cycle and DNA damage repair, all of which are directly linked to cell fate, with a focus on the difference between normal cells and cancer cells.
- To understand established and new theory regarding cell transformation as well as cancer stem cells and relevant ES/iPS cells.
- To understand the lymphatic system as a metastasis pathway of cancer.
- To understand the position of the arteries used for intra-arterial infusion cancer therapy.
- To understand methods and processes for pathological diagnosis of cancer (benign and malignant/infiltrating and metastatic) in cancer treatment medical practice.
- To understand the importance of judging malignancy grade with relevance to treatment methods.
- To understand diagnosis and treatment of early cancer in comparison with advanced cancer.
- To understand change in cancer lesions after treatment.

[Outline]

This course is designed to comprehensively teach basic medical science underlying recent progress in treatment options for cancer treatment medical practice (e.g., high precision radiotherapy, minimal invasive surgery, molecular target therapy and immune checkpoint inhibitors).

4. Course Objectives

To understand the behavior and true condition of cancer at the molecular level and from a morphological viewpoint with relevance to diagnosis and treatment.

5. Format

A bidirectional class will be conducted, as well as presentations, lectures and video content to promote active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Clinical anatomy of chest, abdomen and pelvic cancer
2	Degrees of atypism and malignancy of cancer
3	Role of pathological diagnosis in cancer chemotherapy
4	Early cancer and advanced cancer
5	Sites of occurrence and diversity of cancer
6	Biochemical characteristics of cancer cells
7	Cancer and cell cycle
8	Hereditary cancer
9	Characteristics of cancer cells
10	Oncogenes and tumor suppressor genes

The assessment will be by the report assignments.

7. Prerequisite Reading

None.

8. Reference Materials

To be indicated in the lecture if necessary.

9. Language Used

All classes are conducted in English.

10. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

11. Note(s) to Students

It is expected that anyone who is interested in the field of oncology will participate actively.

Minimally Invasive Treatment for Cancer. I

(Code: 4821, 1st – 2nd year, 1 unit)

(Course ID: GS-c4821-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
FUKUSHIMA Hiroshi	Assistant Professor	Department of Urology	fukuuro@tmd.ac.jp
KIKUCHI Akifumi	Assistant Professor	Department of Gastrointestinal Surgery	kikuchi.srg2@tmd.ac.jp
ISHIBASHI Hironori	Junior Associate Professor	Department of Thoracic Surgery	hishiba.thsr@tmd.ac.jp
ISHIKAWA Yoshiya	Assistant Professor	Department of Hepatobiliary and Pancreatic Surgery	y-ishikawa.msrg@tmd.ac.jp
HOSHINO Akihiro	Assistant Professor	Department of Gastrointestinal Surgery	hosino.srg1@tmd.ac.jp

2. Classroom/Lab Lecture Location

Daigakuin Kougishitsu 3, M&D Tower 11F

3. Course Purpose and Outline

[Course Purpose]

- Understand minimally invasive treatments for various cancers.
- Understand multidisciplinary treatments for cancer that combine surgery, radiation therapy and chemotherapy.

[Outline]

Concerning surgical technique, the concept and results of minimally invasive surgery will be presented, with visual images including video demonstration

4. Course Objectives

- To understand and be able to explain basic concepts related to surgically minimally invasive treatments for cancer.
- To understand and be able to explain the differences between conventional treatments and surgically minimally invasive treatments for cancer.
- To understand and be able to explain the role of minimally invasive treatments in comprehensive cancer diagnosis and treatment.
- To understand and be able to explain the role of minimally invasive treatments in patients' quality of life.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Colon diseases (1)
2	Colon diseases (2)
3	Minimally invasive treatment for hepatobiliary and pancreatic cancer (1)
4	Minimally invasive treatment for hepatobiliary and pancreatic cancer (2)
5	Minimally invasive surgery in urological diseases (1)
6	Minimally invasive surgery in urological diseases (2)
7	Minimally invasive treatment for esophageal cancer (1)
8	Minimally invasive treatment for esophageal cancer (2)
9	Lung cancer treatment (1)
10	Lung cancer treatment (2)

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the participant's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and reporting assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with Minimally Invasive Treatment for Cancer II. It is expected that anyone who is interested in the field of oncology will participate actively.

Minimally Invasive Treatment for Cancer. II

(Code: 4822, 1st – 2nd year, 1 unit)

(Course ID: GS-c4822-L)

1. Instructors

Name	Position	Department	Contact Information
MIURA Masahiko	Chief Instructor / Professor	Department of Oral Radiation Oncology	masa.mdth@tmd.ac.jp
TAKEDA Atsuya	Head of Radiation Oncology Center	Ofuna Chuo Hospital, Radiation Oncology Center	takeda@1994.jukuin.keio.ac.jp
AKIMOTO Tetsuo	Director	Vice president, Department of Radiology, National Cancer Center Hospital East	takimoto@east.ncc.go.jp
UETAKE Hiroyuki	Professor	Department of Specialized Surgeries	h-uetake.srg2@tmd.ac.jp
TODA Kazuma	Junior Associate Professor	Department of Radiation Therapeutics and Oncology	tdmrad@tmd.ac.jp

2. Classroom/Lab Lecture Location

Daigakuin kougishitsu 3, M&D Tower 11F

3. Course Purpose and Outline

[Course Purpose]

- Understand minimally invasive treatments for various cancers.
- Understand the types, indications and efficacy of radiation therapy.

[Outline]

- Understand multidisciplinary treatments for cancer that combine surgery, radiation therapy and chemotherapy.

4. Course Objectives

- To understand and be able to explain minimally invasive treatments, which center around radiation therapy and pharmacotherapy.
- To understand and be able to explain the differences between conventional treatments and minimally invasive treatments for cancer.
- To understand and be able to explain the role of minimally invasive treatments in comprehensive cancer diagnosis and treatment.
- To understand and be able to explain the role of minimally invasive treatments in patients' quality of life.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Stereotactic radiotherapy (1)
2	Stereotactic radiotherapy (2)
3	Radiotherapy in university hospital (1)
4	Radiotherapy in university hospital (2)
5	Combination of anticancer drugs and surgery in colorectal cancer (1)
6	Combination of anticancer drugs and surgery in colorectal cancer (2)
7	Proton therapy (1)
8	Proton therapy (2)
9	Radiotherapy for uterine cancer and prostate cancer (1)
10	Radiotherapy for uterine cancer and prostate cancer (2)

7. Assessment

An overall assessment of graduate school students who have participated in at least 2/3 of face-to-face lectures (including a part of those streamed live) will be made. It will comprise of the participant's attitude (participation in discussions, presentations, etc.) (30%), short tests (30%) and reporting assignments (40%). If the course is taken through E-learning, there will be a confirmation exam after the coursework is completed (also through E-learning) to assess the participant's understanding of the content. Those who pass the exam will be regarded as having fully attended this course. In those cases, the overall assessment will comprise reports with respect to discussions in the class (30%), short tests (30%) and report assignments (40%).

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon/Wed/Fri: 16:00 – 18:00 PM

Contact: MIURA Masahiko, Department of Oral Radiation Oncology (M&D Tower 702)

E-mail: masa.mdth@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with "Minimally Invasive Treatment for Cancer I." It is expected that anyone who is interested in the field of oncology will participate actively.

Organ-specialized Cancer

(Code: 4823, 1st – 2nd year, 1 unit)

(Course ID: GS-c4823-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor /Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
YAMAMOTO Masahide	Junior Associate Professor	Department of Head and Neck Surgery	hide.hema@tmd.ac.jp
KAWADA Kenro	Junior Associate Professor	Department of Gastrointestinal Surgery	kawada.srg1@tmd.ac.jp
NAKAGAWA Tsuyoshi	Junior Associate Professor	Department of Specialized Surgeries	nakagawa.srg2@tmd.ac.jp
SATO Yuya	Assistant Professor	Department of Gastrointestinal Surgery	yusatoh.srg1@tmd.ac.jp
WAKANA Kimio	Junior Associate Professor	Hospital Department of Perinatal and Women's Medicine	k.wakana.crm@tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

To understand the principle and practice of standard and multidisciplinary treatment for organ-specialized cancer.

[Outline]

The classification, pathology and diagnosis of organ-specialized cancer will be outlined. Surgery and chemotherapy, as well as a combination of both as multidisciplinary treatment will be explained in detail, alongside the indication, target and benefit of such treatments. In addition, recent clinical studies and topics also will be covered.

4. Course Objectives

- To understand and be able to explain information on diagnosis and treatment for organ-specialized cancer.
- To understand and be able to explain the current status of multidisciplinary diagnosis and treatment for organ-specialized cancer.
- To understand and be able to explain the role of diagnosis and treatment for organ-specialized cancer in comprehensive cancer diagnosis and treatment.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

- A diagnosis and treatment of cancers of any organ (esophagus, stomach, mammary gland, urinary and gynecologic organs) will be outlined.
- This course is organized together alongside the course on “Pediatric and Rare Cancers.”

No.	Topics
1	Urological cancer (1)
2	Urological cancer (2)
3	Gynecologic cancer (uterine, ovarian) (1)
4	Gynecologic cancer (uterine, ovarian) (2)
5	Breast cancer (1)
6	Breast cancer (2)
7	Lung cancer specifics (internal medicine) (1)
8	Lung cancer specifics (internal medicine) (2)
9	Gastric cancer (1)
10	Gastric cancer (2)

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with “Pediatric and Rare Cancers” and “Advanced Clinical Oncology.”

It is expected that anyone who is interested in the field of oncology will participate actively.

Pediatric and Rare Cancers

(Code: 4824, 1st – 2nd year, 1 unit)

(Course ID: GS-c4824-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
TAKAGI Masatoshi	Associate Professor	Department of Pediatrics and Developmental Biology	m.takagi.ped@tmd.ac.jp
MICHI Yasuyuki	Junior Associate Professor	Department of Oral and Maxillofacial Surgery	y-mic.mfs@tmd.ac.jp
NAMIKI Takeshi	Associate Professor	Department of Dermatology	tnamderm@tmd.ac.jp
TAMURA Kaoru	Assistant Professor	Hospital Department of Neurosurgery	tamura.nsrg@tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

To understand the principle and practice of individual and multidisciplinary treatment for pediatric and rare cancers.

[Outline]

The classification, pathology and diagnosis of pediatric and rare cancers will be outlined. Surgery and chemotherapy, as well as a combination of both as multidisciplinary treatment will be explained in detail as well as the indication, target, and benefit of such treatment. In addition, recent clinical studies and topics also will be covered.

4. Course Objectives

- To understand and explain information on diagnosis and treatment for pediatric and rare cancers.
- To understand and explain the current status of multidisciplinary diagnosis and treatment for pediatric and rare cancers.
- To understand and explain the role of diagnosis and treatment for pediatric and rare cancers in comprehensive cancer diagnosis and treatment.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

- A diagnosis and treatment of pediatric and rare cancers (head/neck, skin, and hepatobiliary-pancreatic cancer and brain tumor) will be outlined.
- This course is organized together with the course on “Organ-specialized Cancer Therapy.”

No.	Topics
1	Pediatric cancer (1)
2	Pediatric cancer (2)
3	Brain tumors (1)
4	Brain tumors (2)
5	Hepatobiliary, pancreatic cancer (1)
6	Hepatobiliary, pancreatic cancer (2)
7	From basics to application of treatment for head and neck cancer (1)
8	From basics to application of treatment in head and neck cancer (2)
9	Skin malignancies (1)
10	Skin malignancies (2)

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with “Organ-specialized Cancer Therapy” and “Advanced Clinical Oncology.”

It is expected that anyone who is interested in the field of oncology will participate actively.

Advanced Clinical Oncology

(Code: 4825, 1st – 2nd year, 1 unit)

(Course ID: GS-c4825-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor/ Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
SATO Shingo	Junior Associate Professor	Medical Hospital	satoshin.phy2@tmd.ac.jp
KAMIYA Takahiro	Assistant Professor	Medical Hospital	kamiya.ped@tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

【Course Purpose】

To understand the principle and practice of advanced clinical oncology focused on chemotherapy.

【Outline】

The practical implementation and recent trends in chemotherapy for various types of cancer will be outlined. Multidisciplinary treatment focused on chemotherapy will be explained in detail, as well as the indication, target and benefit of such treatment. In addition, recent clinical studies and topics also will be covered.

4. Course Objectives

- To understand and be able to explain information on advanced clinical oncology.
- To understand and be able to explain the current status of multidisciplinary diagnosis and treatment in advanced clinical oncology.
- To understand and be able to explain the position of advanced clinical oncology in comprehensive cancer diagnosis and treatment.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course.

6. Course Details

- A lecture will be given on areas where progress has been made regarding chemotherapy in organ-specialized cancer diagnosis and treatment (e.g., lung, colorectal, and blood cancer, and bone and soft tissue sarcoma).
- It is beneficial to take this course together with “Organ-specialized Cancer Therapy” and “Pediatric and Rare Cancers.”

No.	Topics
1	Importance of diagnosis, treatment and team medical care in bone metastasis (1)
2	Importance of diagnosis, treatment and team medical care in bone metastasis (2)
3	Actual state of chemotherapy—Aiming for optimal treatment of colorectal cancer (1)
4	Actual state of chemotherapy—Aiming for optimal treatment of colorectal cancer (2)
5	Current treatment of hematopoietic tumors (1)
6	Current treatment of hematopoietic tumors (2)
7	Diagnosis and treatment of esophageal cancer (1)
8	Diagnosis and treatment of esophageal cancer (2)
9	Introduction to palliative oncology (1)
10	Introduction to palliative oncology (2)

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is preferable to take this course together with “Pediatric and Rare Cancers.”

It is expected that anyone who is interested in the field of oncology will participate actively.

Cancer Genomics and Precision Medicine

(Code: 4826, 1st – 2nd year, 1 unit)
(Course ID: GS-c4826-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp
KANO Yoshihito	Assistant Professor	Department of Clinical Oncology	kano.canc@tmd.ac.jp
TANIMOTO Kosuke	Assistant Professor	Medical Research Institute of Genome Laboratory	ktani.nri@mri.tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

Organize systematic knowledge on the foundation and medical practice surrounding cancer genomes, the foundation and medical practice surrounding cancer precision medicine, and the field's current status.

[Outline]

Classes will include an overview of cancer genomes and cancer precision medicine from various angles. Lectures will be interactive, including active discussions during the course.

4. Course Objectives

- To understand and be able to explain knowledge of cancer genomes and precision medicine.
- To understand and be able to explain the role of cancer genomes and precision medicine in comprehensive cancer medical care.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course. All programs are conducted in an omnibus format.

6. Course Details

Lectures will be given focused on the following subjects:

- The foundation of genetics and genetic mutation.
- The foundation of next generation sequencing
- Annotation and curation for next-generation sequencing (NGS) analysis data
- Current status and challenges for implementation of genomic treatment

No.	Topics
1	Basics of next generation sequencers (1)
2	Basics of next generation sequencers (2)
3	Basics of genetic/genomic mutations (1)
4	Basics of genetic/genomic mutations (2)
5	Basics of cancer genomic medicine (1)
6	Basics of cancer genomic medicine (2)
7	Data analysis in cancer gene panel tests (1)
8	Data analysis in cancer gene panel tests (2)
9	Clinical implementation of cancer genome profiling tests (1)
10	Clinical implementation of cancer genome profiling tests (2)

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

To be indicated in the lecture if necessary.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is expected that anyone who is interested in the field of oncology will participate actively.

Palliative Medicine: Outline

(Code: 4827, 1st – 2nd year, 1 unit)

(Course ID: GS-c4827-L)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp

2. Classroom/Lab Lecture Location

The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

Palliative medicine in Japan was originally focused on terminally ill cancer patients with pain. However, the notion surrounding it has changed as it has also been indicated in the early course of cancer treatment. This course provides an overview toward a general understanding of palliative medicine. The aim is to acquire an understanding of patients' quality of life, assess patients' overall profiles and to learn communication skills when addressing patients and their families.

[Outline]

Provide an outline on the philosophy, aim, significance and current situation of palliative care. In addition, the following will be explained: hospice, palliative care in the palliative care unit and home palliative care according to actual clinical experience. Lectures will be given on the basic quality of life scales in palliative medicine, including descriptions and applied of quality of life measures to assess total pain, and communication with patients and their families.

4. Course Objectives

By the end of this course, students will be able to:

- Understand and explain the concept of palliative medicine.
- Understand and explain assessment and management in palliative medicine.
- Understand and explain the role of palliative medicine in comprehensive cancer treatment.
- Understand and explain the role of communication in comprehensive cancer treatment.
- Understand and explain the evaluation of quality of life.

5. Format

A bidirectional class will be conducted including presentations, lectures and video content for the purpose of active participation by students taking this course.

6. Course Details

Lecture on palliative medicine for the following diseases:

- Introduction to palliative medicine
- Assessment and management of physical symptoms
- Communication in cancer treatment

No.	Topics
1	Introduction to palliative medicine (1)
2	Introduction to palliative medicine (2)
3	Overview of psycho-oncology (1)
4	Overview of psycho-oncology (2)
5	Approach to physical symptoms in palliative care unit (1)
6	Approach to physical symptoms in palliative care unit (2)
7	Overview of palliative care at home (1)
8	Overview of palliative care at home (2)
9	Communication in palliative care (1)
10	Communication in palliative care (2)

7. **Assessment**

The assessment will be by the report assignments.

8. **Prerequisite Reading**

None.

9. **Reference Materials**

To be indicated in the lecture if necessary.

10. **Language Used**

All classes are conducted in English.

11. **Office Hours**

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. **Note(s) to Students**

It is expected that anyone who is interested in the field of oncology will participate actively.

SISRS 601 (4828) Applied Cancer Biology and Immunology

(Code: 4828, 1st~2nd year, 1 unit)

(Course ID: GS-c4828-L)

1. Instructors

Name	Position	Department	Contact Information
Pradit Rushatamukayanunt	Chief instructor/ Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Pradit.rus@mahidol.ac.th
Suebwong Chutapisith	Associate Professor Dr.	Division of Head Neck and Beast, Department of Surgery	suebwong.chu@mahidol.ac.th

2. Classroom/Lab

Division of Head Neck and Beast, Department of Surgery Faculty of Medicine Siriraj Hospital, Syamindra building, 13floor

3. Course Purpose and Outline

[Course Purpose]

Basic knowledge about cancer biology and immunology are important toward basic research as well as implement to clinical arena. Application of cancer biology and immunology toward clinical care will be educated

[Course Outline]

Background of cancer biology and immunology will be reviewed. Application toward nouveau treatment approaches will be discussed

4. Course Objectives

The student will be able to understand application of biology and immunology on the context of cancer treatment.

5. Format

The course includes lectures and seminars

6. Course Details

No	Date	Time	Topic/Details	Instructors
1	9 Feb 2021	10.00 – 13.00	Introduction to Cancer Immunology	Lecturer Dr. Pradit Rushatamukayanunt
2	23 Feb 2021	10.00 – 13.00	Cancer genetics and epigenetics	Lecturer Dr. Pradit Rushatamukayanunt
3	9 Mar 2021	10.00 – 13.00	Cellular Signaling and Carcinogenesis	Lecturer Dr. Pradit Rushatamukayanunt
4	23 Mar 2021	10.00 – 13.00	Cancer Phenotypes toward precision cancer therapy	Lecturer Dr. Pradit Rushatamukayanunt
5	30 Mar 2021	10.00 – 13.00	Cancer Immunotherapy	Lecturer Dr. Pradit Rushatamukayanunt
			Examination	

7. Assessment

Attendance (70%) and Presentation (20%)

8. Prerequisite Reading

None.

9. Reference Materials

None.

10. Important Course Requirements

None.

11. Language used

All classes are conducted in English.

12. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Lecturer Dr. Pradit Rushatamukayanunt, Division of Head Neck and Beast,
Department of Surgery

E-mail: Pradit.rus@mahidol.ac.th

Please contact the instructors regarding questions or consultations.

13. Note(s) to Students

None.

SISR 602 (4829) Stem cell for surgical patient

(Code: 4829, 1st~2nd year, 1 units)

(Course ID: GS-c4829-L)

1. Instructors

Name	Position	Department	Contact
Nuttawut Sermsathanasawadi	Chief Instructor / Associate Professor Dr.	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th
Nuttapol Chruengkamlow	Researcher	Division of Research Faculty of Medicine	Nuttapol.chr@mahidol.ac.th
Methichit Wattapanitch	Asistant Professor	Division of Research Faculty of Medicine	Methichit.wat@mahidol.ac.th
Visnu Lohsiriwat	Lecturer	Division of Head-Neck and Breast Surgery, Department of Surgery	Visnu.loh@mahidol.ac.th
Patimaporn Wongprompitak	Lecturer Dr.	Division of Research Faculty of Medicine	Patimaporn.won@mahidol.ac.th
Tatsanee Phermthai	Lecturer Dr.	Division of Research Faculty of Medicine	Tatsanee.phe@mahidol.ac.th

2. Classroom/Lab Lecture

- Lecture Online by Zoom
- Division of Vascular Surgery, Syamindra Building 12th floor, Department of Surgery, Faculty of Medicine Siriraj hospital, Mahidol University
- MU-TMDU office, 727 Room, SiMR Building 7th Floor.

3. Course Purpose and Outline

The purpose of this course is to encourage students to comprehensively understand stem cells for treatment of surgical patients. Students will improve their abilities to independently study stem cell application through education and training about origins, properties, and regulations of stem cells that function in tissue development, maintenance and regeneration. The course will especially focus on endothelial progenitor cells in view of neovascularization for therapeutic angiogenesis in no-option critical limb ischemia.

4. Course objectives

The objectives of this course are as follows: To help students absorb knowledge and research strategies that are necessary to understand stem cell development, maintenance, and fate determinations, particularly in endothelial progenitor cells. To make students learn molecular biological, cell biological and histological methods for conducting research projects. To develop students' skills to recognize problems by themselves, construct working hypotheses, design and perform experiments to solve the research question, properly discuss experimental results. and, report the summary of research in English.

5. Format

Programs are set up for a small number of students (not more than 3 students) for more intense discussion and in-depth participation.

6. Course Description and Timetable

Date	Time	Topic/Details	Instructors
Tue 22 June 2021	13.00-16.00	Lecture Stem Cell for Vascular Surgery	Assoc. Prof. Dr.Nuttawut Sermsathanasawadi
Tue 8 July 2021	13.00-16.00	Induced pluripotent stem cells: Applications in Biomedical Research	Assist. Prof. Methichit Wattanapanitch Dr.Nuttapol Chruengkamlow
Mon 14 July 2021	13.00-16.00	Clinical Application of ADSCs in Breast Reconstructive Surgery	Lecturer Visnu Lohsiriwat
Thu 24 July 2021	13.00-16.00	Limbal stem cell niche	Lecturer Dr. Patimaporn Wongprompitak Dr.Nuttapol Chruengkamlow
Thu 6 Aug 2021	13.00-16.00	Mesenchymal stem cell from the route of OB-GYN	Dr. Tatsanee Phermthai Dr.Nuttapol Chruengkamlow
		Examination	Assoc. Prof. Dr.Nuttawut Sermsathanasawadi

Lecture and conference:

Goals/outline:

This course will introduce to students the recent topics in the research field of stem cell for critical limb ischemia.

Research Meeting 15:00 ~ 16:30 on every Friday

Practice :

In this course, students will learn the molecular basis of the stem cells (endothelial progenitor cell). Students will receive exposure to cutting edge concepts and research technologies, and study regulatory mechanisms in endothelial progenitor cell. With emphasis also on physiological and clinical application of stem cells, the course aims to improve student's understanding of stem cells.

Available programs: Progress report 9.00-10.00 on every Tuesday

Lab :

Each student will conduct independent research, under supervision of instructors, on endothelial progenitor cells. Students are advised to design experiments regarding endothelial progenitor cells.

Through execution of such experiments, students shall understand general property of endothelial progenitor cells in both/either physiological and/or clinical application (translational Research).

Available programs: Participation to the research groups by consultation

7. Assessment

Grading will be undertaken based on lecture/practice/lab participation, performance, presentation, reports, and lab work execution.

8. Prerequisite Reading

None.

9. Reference Materials

None.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact : Associate Professor Dr.Nuttawut Sermsathanasawadi,
Division of Vascular Surgery, Department of Surgery

Email: Nuttawut.ser@mahidol.ac.th Tel +662-4198021

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 619 (4830) Basic Laboratory Relevance to Surgery

(Code: 4830, 1st~2nd year, 1 units)

(Course ID: GS-c4830-L)

1. Instructors

Name	Position	Department	Contact Information
Doonyapat Sanguanraksa	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Doonyapat.san@mahidol.ac.th
Pradit Rushatamukayanunt	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Pradit.rus@mahidol.ac.th
Waraporn Imruetaicharoenchoke	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Waraporn.imr@mahidol.ac.th

2. Classroom/Lab Lecture

Please check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

[Course Purpose]

Principles and practiced of experiments that are relevant to research involving surgical diseases will be educated

[Course Outline]

Basic principles of the experiments as well as experimental practiced will be coached.

4. Course Objectives:

The student will be able to understand principles of experiments and gain hands-on experience.

5. Format

The course includes lectures and experiments practice

6. Course Details

No.	Topics	Instructors
1.	Basic Laboratory Relevance to Surgery 1	Doonyapat Sanguanraksa Pradit Rushatamukayanunt Waraporn Imruetaicharoenchoke
2.	Basic Laboratory Relevance to Surgery 2	Doonyapat Sanguanraksa Pradit Rushatamukayanunt Waraporn Imruetaicharoenchoke
3.	Basic Laboratory Relevance to Surgery 3	Doonyapat Sanguanraksa Pradit Rushatamukayanunt Waraporn Imruetaicharoenchoke
4.	Basic Laboratory Relevance to Surgery 4	Doonyapat Sanguanraksa Pradit Rushatamukayanunt Waraporn Imruetaicharoenchoke
5.	Basic Laboratory Relevance to Surgery 5	Doonyapat Sanguanraksa Pradit Rushatamukayanunt Waraporn Imruetaicharoenchoke

7. Assessment

None.

8. Prerequisite Reading

Requirement None.

9. Reference Materials

Should the international students register the subject for credit, English will be provided.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Lecturer Dr. Doonyapat Sanguanraksa, Division of Head Neck and Beast, Department of Surgery

E-mail: doonyapat.san@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 616 (4831) Cancer Imaging

(Code: 4831, 1st~2nd year, 1 units)

(Course ID: GS-c4831-L)

1. Instructors

Name	Position	Department	Contact Information
Prawej Mahawithitwong	Associate Professor	Division of General Surgery, Department of Surgery	Prawej.mah@mahidol.ac.th
Prawat Kositamongkol	Assistant Professor	Division of General Surgery, Department of Surgery	prawat.kos@mahidol.ac.th
Somchai Limsrichamrern	Assistant Professor	Division of General Surgery, Department of Surgery	somchai96@hotmail.com
Wethit Dumronggittigule	Assistant Professor	Division of General Surgery, Department of Surgery	Wethit.dum@mahidol.ac.th
Pholasith Sangserestid	Lecturer	Division of General Surgery, Department of Surgery	Pholasith.san@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture room, Division of General Surgery, Syamindra Building 12th floor

3. Course Purpose and Outline

To teach the student to understand the disease of Cancer Imaging from the surgical viewpoint.

The surgery techniques and patient care will be included in this course.

4. Course objectives

At the end of the course, the participants will be able to :

1. Describe pathogenesis of important Cancer Imaging
2. Describe investigation and surgical treatment of Cancer Imaging
3. Describe how to approach Cancer Imaging
4. Describe the surgery and techniques used in the treatment of Cancer Imaging
5. Describe the pre and post operative care of the patients with Cancer Imaging

5. Format

Lecture, seminars and conferences. All programs will be delivered in English.

6. Course Details

No.	Date	Class Content	Instructor
1.	9:00-12:00	How to approach Cancer Imaging	Prawat Kositamongkol
2.	9:00-12:00	Pre and post operative care of Cancer Imaging	Wethit Dumronggittigule
3.	9:00-12:00	Important complications of Cancer Imaging	Somchai Limsrichamren
4.	9:00-12:00	Endoscopic treatment of Cancer Imaging	Pholasith Sangserestid
5.	9:00-12:00	Cancer Imaging	Prawej Mahawithitwong

7. Assessment

Grades are determined based on lecture attendance and written and oral examination. Basic knowledge, surgery, patient care and attitude will be evaluated.

8. Prerequisite Reading

Reading materials will be announced and provided before the course.

9. Reference Materials

To be announced before the class.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Prawej Mahawithitwong, Division of General Surgery, Department of Surgery

E-mail: prawej.mah@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

This course is included in elective courses in joint Ph.D. program.

Ph.D. student focusing in Cancer Imaging is encouraged to take this course.

The student who wish to continue his surgical career in Cancer Imaging will have a chance to learn and understand Cancer Imaging from basic knowledge to patient care.

This is an elective course to be taken during joint Ph.D. program providing by Mahidol university.

SISR 609 (4832) Robotic Surgery in Urology

(Code: 4832, 1st~2nd year, 1 units)

(Course ID: GS-c4832-L)

1. Instructors

Name	Position	Department	Contact Information
Sittiporn Srinualnud	Chief Instructor/ Associate Professor	Division of Urology Surgery, Department of Surgery	Sittiporn.sri@mahidol.ac.th
Chalairat Suk-ouichai	Lecturer	Division of Urology Surgery, Department of Surgery	Chalairat.suk@mahidol.ac.th
Siros Jitpraphai	Lecturer	Division of Urology Surgery, Department of Surgery	Sirros.jit@mahidol.ac.th
Varat Woranisakul	Lecturer	Division of Urology Surgery, Department of Surgery	Varat.wor@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture: Division of Urology Surgery, 12th floor Syamindra Building, Siriraj Hospital

Ward round: Urology ward, 7th (North) floor Chalermparakiet Building, Siriraj Hospital

Operating theatre: 5th floor Syamindra Building, Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, students will be able to:

- Understand common diseases in the field of Robotic Surgery in Urology
- Understand treatment and operations Robotic Surgery in Urology
- Develop research questions relating to Robotic Surgery in Urology
- Generate idea in innovations relating treatment of Robotic Surgery in Urology

4. Course objectives

This course provides a general knowledge in Robotic Surgery in Urology in Prostatectomy, Nephrectomy and Cystectomy

5. Format

- Lecture: essential topics in Robotic Surgery in Urology
- Clinical practice: participate in operating theatre, ward round and out-patient encounters in
- Conference and journal club: presentation and participation in discussion
- Group discussion: in-depth discussion with supervisors

6. Course Details

Ward round (7th (North) floor Chalermpkrakiet Building, Siriraj Hospital):

Monday – Friday 7.00-8.00

Operating theater (OR, 5th floor Syamindra building):

Monday – Friday 9.00-16.00

Grand round Friday 8.00-9.00

Conference and group discussion: to be announced

7. Assessment

Grades are based on attendance of lectures, performances on assignments, and levels of attitude, skills and knowledge

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read those materials beforehand.

9. Reference Materials

Campbell-Walsh Urology Edition 11th

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Sittiporn Srinualnud, Division of Urology Surgery,
Department of Surgery

E-mail: Sitsrinualnad@yahoo.com

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 603 (4833) Basic Surgical Endoscopy

(Code: 4833, 1st~2nd year, 1 units)

(Course ID: GS-c4833-L)

1. Instructors

Name	Position	Department	Contact Information
Jirawat Swangsri	Chief Instructor/ Assistant Professor Dr.	Division of General Surgery, Department of Surgery	Jirawat.swa@mahidol.ac.th
Vitoon Chinswangwatanakul	Associate Professor Dr.	Division of General Surgery, Department of Surgery	Vitoon,chi@mahidol.ac.th
Asada Methasate	Associate Professor Dr.	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Thawatchai Akaraviputh	Professor	Division of General Surgery, Department of Surgery	Thawatchai.aka@mahidol.ac.th
Nonthalee Pausawasdi	Associate Professor	GI Med unit, Department of Medicine	Nonthalee.pau@mahidol.ac.th
Prasit Mahawongkajit	Associate Professor	GI Med unit, Department of Medicine	-
Atthaphorn Trakarnsanga	Associate Professor	Division of General Surgery, Department of Surgery	atthaphornt@gmail.com
Thammawat Parakonthon	Assistant Professor	Division of General Surgery, Department of Surgery	t.parakonthon@gmail.com
Voraboot Taweerutchana	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mehidol.ac.th
Chainarong Phalanusitthep	Lecturer	Division of General Surgery, Department of Surgery	Chainaraong.pha@mahidol.ac.th

Julajak Limsrivilai	Instructor	GI Med unit, Department of Medicine	-
Manus Rujivarodom	Instructor	GI Med unit, Department of Medicine	-
Kotchakorn maipeng	Instructor	GI Med unit, Department of Medicine	-
Nicha Srisuvoranan	Instructor	GI Med unit, Department of Medicine	-
Uayporn Siriyuyuen	Instructor	GI Med unit, Department of Medicine	-
Kumagai Youichi	Associate Professor	Department of Digestive Tract and General Surgery, Saitama Medical Center, Saitama Medical University, Saitama, Japan.	kuma7sr1@saitama-med.ac.jp
Hirasawa Toshiaki	Associate Professor	Division of Gastroenterology, Cancer Institute Hospital, Japanese Foundation of Cancer Research, Tokyo, Japan	toshiaki.hirasawa@jfcr.or.jp
Kawada Kenro	Associate Professor	-	-
Yutaka Tokairin	Associate Professor	Department of Surgery, Toshima Hospital Tokyo Metropolitan Health and Hospitals Corporation, Tokyo, Japan	-

2. Classroom/Lab Lecture

Lecture: Division of General Surgery, 12th floor Syamindra Building, Siriraj Hospital

Ward round: Surgical ward, 7th floor 72nd year Building, Siriraj Hospital

Operating theatre: 5th floor Syamindra Building, Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, students will be able to:

- Understand common diseases in the field of Endoscopic and minimally invasive surgery

- Understand treatment and operations Endoscopic and minimally invasive surgery
- Develop research questions relating to Endoscopic and minimally invasive surgery and their treatment.
- Generate idea in innovations relating treatment of Endoscopic and minimally invasive surgery.
- Obtain view of basic sciences including molecular biology and metabolomics methods in applying for research in Endoscopic and minimally invasive surgery.

4. Course objectives

This course provides a general introduction to Endoscopic and minimally invasive surgery. Common Endoscopic and minimally invasive surgery conditions will be thoroughly explored by means of lecture and clinical experience. Common Endoscopic and minimally invasive operations and procedures will be demonstrated through the course. Selected case studies will be discussed during group discussion. Integration of basic knowledge and innovative procedure including Advanced imaging endoscopy and high technology procedure such as endoscopic surgery, laparoscopic until Robotic assisted for implement to cancer related research.

5. Format

- Lecture: essential topics in Endoscopic and minimally invasive surgery
- Clinical practice: participate in operating theatre, ward round and out-patient encounters in Minimally invasive Surgery Unit, Siriraj Hospital
- Conference and journal club: presentation and participation in discussion
- Group discussion: in-depth discussion with supervisors

6. Course Details

Ward round (7th floor 72yr building): Monday - Friday 7.00-8.00

Operating theater (OR, 5th floor Syamindra building): Monday – Thursday 9.00-16.00

Grand round (12th fl Syamindra building): Thursday 14.00-16.00

Conference and group discussion: to be announced

N O	Date	Time	Topic/Details	Instructors
1	Mon 11- 1-21	14.00 – 15.00	Principle of laparoscopic and robotic surgery	Assoc. Prof. Dr. Vitoon Chinswangwatanakul

2	Thu 14- 1-21	13.00 – 14.00	Basic principle of endoscopy and innovation	Prof. Thawatchai Akaraviput
3	Mon 18- 1-21	45 mins	Minimally invasive of hernia surgery	Assoc. Prof. Dr.Asada Methasate
4	Thu 21-1- 21	45 mins	History and principle of esophageal cancer treatment	Assist. Prof. Dr.Jirawat Swangsri
5	Mon 25- 1-21	45 mins	Early upper GI cancer detection	Dr. Kumagai Youichi
6	Thu 28-1- 21	45 mins	Role of AI in GI malignancy detection	Dr. Hirasawa Toshiaki
7	Mon 1-2- 21	45 mins	Principle of ESD for early cancer treatment	Dr. Kawada Kenro
8	Thu 4-2- 21	45 mins	Minimally invasive surgery for esophageal cancer	Dr. Yutaka Tokairin
9	Mon 8-2- 21	45 mins	Minimally invasive surgery for gastric cancer	Assist. Prof. Thammawat Parakonthun
10	Thu 11-2- 21	45 mins	Principle of EUS for subepithelial tumor detection	Assoc. Prof. Nonthalee Pausawasdi

			Midterm Examination	
11	Thu 18-2-21	45 mins	Management of GI subepithelial tumor	Assoc. Prof. Prasit Mahawongkajit
12	Mon 22-2-21	45 mins	Approach to small bowel lesion	Lecturer Julajak Limsrivilai
13	Thu 25-2-21	45 mins	ERCP and innovation	Lecturer Manus Rujivarodom
14	Mon 1-3-21	45 mins	Principle of bariatric endoscopy	Dr. Kotchakorn
15	Thu 4-3-21	45 mins	Role of minimally invasive bariatric surgery	Assist. Prof. Voraboot Taweerutchana
16	Mon 8-3-21	45 mins	Role of minimally invasive endocrine surgery	Lecturer Nicha Srisuvoranan
17	Thu 11-3-21	45 mins	IEE for colon lesion detection	Dr. Uayporn Siriyuyuen
18	Mon 15-3-21	45 mins	Minimally invasive for pelvic floor	Lecturer Siriluck Prapasrivorakul
19	Thu 18-3-21	45 mins	Principle of laparoscopic treatment of colon cancer	Assoc. Prof. Auttaporn Trakarnsanga

20	Mon 22- 3-21	45 mins	Minimally invasive for Linear surgery	Assist Prof. Wethit Dumronggittigule
21	Thu 25-3- 21	45 mins	Minimally invasive for Pancreatic surgery	Lecturer Pholasith Sangserestid
Final Examination				

7. Assessment

Grades are based on attendance of lectures, performances on assignments, and levels of attitude, skills and knowledge

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read those materials beforehand.

9. Reference Materials

Jarnagin WR, Allen PJ, Chapman WC, D'Angelica MI, DeMatteo RP, Do RKG, Vauthey JN. Blumgart's Surgery of the Liver, Biliary Tract, and Pancreas. 6th Edition. Philadelphia, PA: Elsevier, 2017.

Further reference will be announced before class.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Assistant Professor Dr. Jirawat Swangsri Tel: +662-419-8005

E-mail: Jirawatmissi@gmail.com

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 607 (4834) Advanced Inter Disciplinary Endoscopy for Gastrointestinal Tract Cancer

(Code: 4834, 1st~2nd year, 1 units)
(Course ID: GS-c4834-L)

1. Instructors

Name	Position	Department	Contact Information
Thawatchai Akaraviputh	Chief instructor/ Professor	Division of General Surgery, Department of Surgery	Thawatchai.aka@mahidol.ac.th
Vitoon Chinswangwatanakul	Associate Professor	Division of General Surgery, Department of Surgery	Vitoon.chi@mahidol.ac.th
Asada Methasate	Associate Professor	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Jirawat Swangsri	Assistant professor	Division of General Surgery, Department of Surgery	Jirawat.swa@mahidol.ac.th
Atthaphorn Trakarnsanga	Associate Professor	Division of General Surgery, Department of Surgery	Atthaphorn.tra@mahidol.ac.th
Thammawat Parakonthon	Assistant Professor	Division of General Surgery, Department of Surgery	Thammawat.par@mahidol.ac.th
Voraboot Taweerutchana	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mahidol.ac.th
Chainarong Phalanusitthep	Lecturer	Division of General Surgery, Department of Surgery	Chainarong.pha@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture: Division of General Surgery, 12th floor Syamindra Building, Siriraj Hospital
Endoscopy Suite: Siriraj GI Endoscopy Center, 3rd floor 84th year Building, Siriraj Hospital
Operating theatre: 5th floor Syamindra Building, Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, students will be able to:

- Understand complex diseases in the field of Gastrointestinal Endoscopy and Laparoscopic Surgery.
- Understand treatment in Interdisciplinary Endoscopy.
- Develop research questions relating to Interdisciplinary Endoscopy and their treatment.
- Generate idea in innovations relating treatment of Gastrointestinal Endoscopy.
- Obtain view of basic sciences including molecular biology and metabolomics methods in applying for research in Advanced Interdisciplinary Endoscopy.

4. Course objective(s)

This course provides a general introduction to Interdisciplinary Endoscopy. Common Gastrointestinal Endoscopy conditions will be thoroughly explored by means of lecture and clinical experience. Advanced Endoscopic & Laparoscopic treatment will be demonstrated through the course. Selected case studies will be discussed during group discussion. Integration of basic knowledge and innovative procedure including

Advanced imaging endoscopy and high technology procedure such as endoscopic surgery, laparoscopic until Robotic assisted for implement to cancer related research.

5. Format

- Lecture: essential topics in Interdisciplinary Endoscopy.
- Clinical practice: participate in operating theatre, Endoscopy Center and out-patient encounters in Minimally invasive Surgery Unit, Siriraj Hospital
- Conference and journal club: presentation and participation in discussion
- Group discussion: in-depth discussion with supervisors

6. Course Details

Endoscopic Demonstration (Siriraj GI Endoscopy Center: 3rd floor 84th yr. building): Monday 9.00-16.00

Operating theater (OR, 5th floor Syamindra building): Tuesday – Friday 9.00-16.00

Pre- & Post-operative round (12th floor Syamindra building): Thursday 14.00-16.00

Conference and group discussion: to be announced

7. Assessment

Grades are based on attendance of lectures, performances on assignments, and levels of attitude, skills and knowledge

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read those materials beforehand.

9. Reference Materials

Further reference will be announced before class.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Prof. Thawatchai Akaraviputh, MD, FRCST, Dr.med. (Hamburg).

Email: Akaraviputh@gmail.com Tel: +662-419-8005

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR608 (4835) Perioperative Care Surgical Patient

(Code: 4835, 1st~2nd year, 1 units)

(Course ID: GS-c4835-L)

1. Instructors

Name	Position	Department	Contact Information
Varut Lohsiriwat	Professor Dr. (chief instructor)	Division of General Surgery, Department of Surgery	bolloon@hotmail.com, Varut.Loh@mahidol.ac.th
Chutwichai Tovikkai	Associate Professor Dr.	Division of General Surgery, Department of Surgery	Chutwichai.tov@mahidol.ac.th
Thammawat Parakonthun	Assistant Professor	Division of General Surgery, Department of Surgery	Thammawat.par@mahidol.ac.th
Voraboot Taweerutchan	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mahidol.ac.th
Mingkwan Wongyingsinn	Assistant Professor	Anesthesiology (Preoperative clinic)	Mingkwan.Won@mahidol.ac.th
Jatuporn Sirikun	Assistant Professor	Division of Trauma surgery, Department of surgery	Jutuporn.sir@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture room and seminar room on 12th floor, Syamindra Building, Faculty of Medicine Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, participants will be able to:

- Understand the concept of modern perioperative care including enhanced recovery after surgery (ERAS)
- Understand the key elements of surgical care in preoperative, intraoperative and postoperative period

- Describe the difference of perioperative care in various operations and how to adapt from one to another
- Describe the importance of multidisciplinary team and define what change means to them
- Deal with common problems in perioperative care
- Adapt modern perioperative care in high-risk patients and high-risk operations

4. Course objectives

This course offers a general introduction to modern perioperative care including enhanced recovery after surgery (ERAS). Essential specific details and the key elements of surgical care in preoperative, intraoperative and postoperative period are noted. Selected case studies will be discussed during group discussion.

5. Format

Lectures, group discussions and team project. All programs will be conducted in English.

6. Course Details

N O	Date	Time	Topic/Details	Instructors
1	Thu, 28 Jan 21	9.00 – 12.00	Introduction to perioperative care and enhanced recovery after surgery (ERAS)	Prof. Dr.Varut Lohsiriwat
			Perioperative care in colorectal surgery	Prof. Dr.Varut Lohsiriwat
			Perioperative care in emergency surgery	Prof. Dr.Varut Lohsiriwat
2	Fri, 29 Jan 21	9.00 – 12.00	Prevention of surgical site infection	Prof. Dr.Varut Lohsiriwat
			Nutrition therapy in surgical patients	Prof. Dr.Varut Lohsiriwat
			Why are your surgical patients still in the hospital?	Prof. Dr.Varut Lohsiriwat
3	Mon, 8 Feb 21	13.00 – 16.00	Preoperative optimization	Assoc. Prof. Mingkwan Wongyingsinn

			Patient selection for ambulatory surgery	Assoc. Prof. Mingkwan Wongyingsinn
			Multimodal analgesia	Assoc. Prof. Mingkwan Wongyingsinn
4	Thur, 8 Apr 21	14.00 – 16.00	Perioperative care in liver surgery	Assoc. Prof. Dr.Chitwichai Tovikkai
5	Fri 9, Apr 21	14.00 – 16.00	Perioperative care in pancreatic surgery	Assoc. Prof. Dr.Chitwichai Tovikkai
6	Wed, 18 Mar 21	7.30 – 8.30	Perioperative care in upper GI surgery	Assist.Prof. Thammawat Parakonthun
7	Wed, 7 Apr 21	14.00 – 15.00	Perioperative care in morbid obesity	Assist.Prof. Voraboot Taweerutchana
8	Fri, 7 May 21	14.00 – 15.00	Postoperative monitoring	Assist.Prof. Jatuporn Sirikun
9	Fri, 14 May 21	14.00 – 15.00	Dealing with complications in critically ill surgical patients	Assist.Prof. Jatuporn Sirikun
Final Examination				

7. Assessment

Grades are based on attendance at lecture, performances on assignments, and level of attitude, skill and knowledge.

8. Prerequisite Reading

Reading materials are distributed or specified in advance. Participants are expected to read those materials beforehand.

9. Reference Materials

To be announced before or during individual classes (when relevant).

10. Availability in English

Lectures and all communication are in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Professor Dr. Varut Lohsiriwat , Department of Surgery

E-mail: Varut.loh@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

This is an optional course for PhD students (jointed degree between TMDU and Faculty of Medicine Siriraj Hospital, Mahidol University)

Specialized Surgeries

(Code : 4840, 1st – 2nd year: 4 units)
(Course ID: GS-c4801-S)

1. Instructors

Name	Position	Department	Contact Information
ISHIKAWA Toshiaki	Associate Professor	Department of Specialized Surgeries	ishi.srg2@tmd.ac.jp
KUDO Toshifumi	Associate Professor	Department of Specialized Surgeries	t-kudo.srg1@tmd.ac.jp
NAKAGAWA Tsuyoshi	Junior Associate Professor	Department of Specialized Surgeries	nakagawa.srg2@tmd.ac.jp
OKAMOTO Kentaro	Junior Associate Professor	Department of Specialized Surgeries	okasrg2@tmd.ac.jp

2. Classroom/Lab Lecture Location

Please check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

- 1) To clarify the etiology and progression of gastrointestinal and breast cancers, and establish adequate treatment strategies.
- 2) To understand multidisciplinary treatment for unresectable colorectal cancer and recurrence of cancer.
- 3) To understand the diagnosis and adequate treatment for peripheral vascular disease in cooperation with abdominal surgery.
- 4) To understand the diagnosis and adequate treatment for pediatric surgery, as well as the differences with adult surgery.

4. Course Objectives

- 1) To create treatment strategies for various organ-specific cancers.
- 2) To treat various organ-specific cancers, while taking radical cures and functional disorders into account.
- 3) To develop and carry out multidisciplinary therapies for relapsed/unresectable cancers.
- 4) To develop and carry out multidisciplinary therapies for peripheral vascular disease.
- 5) To develop and carry out multidisciplinary therapies for pediatric surgical diseases.

5. Format

To improve student's presentation and communication abilities, ample opportunities for presentation and discussion will be provided.

6. Class Detail

In order to establish a strategy for treating malignant diseases, it is important to elucidate the mechanism of development and progression of gastrointestinal cancers. Surgical treatment for gastrointestinal cancers may sometime cause physiological dysfunctions and/or hinder digestion. In order to understand the pathogenic mechanism, students will receive lectures on anatomy and physiology. In addition, students will learn about effective treatments for intractable relapsed/unresectable cancers from a multidisciplinary standpoint.

Check the schedule announced at the beginning of the academic year for case conferences, conferences, research progress meetings, journal clubs, lectures and special lectures.

7. Assessment

An overall assessment comprising class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

None.

9. Reference Materials

None.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon. – Fri. 9:00 AM – 17:00 PM

Contact: ISHIKAWA Toshiaki, Department of Specialized Surgeries

E-mail: ishi.srg2@tmd.ac.jp

KUDO Toshifumi, Department of Specialized Surgeries

E-mail: t-kudo.srg1@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Active participation is expected from those who are interested in digestive tract surgery.

Gastrointestinal Surgery

(Code : 4841, 1st – 2nd year: 4 units)

(Course ID: GS–c4841–S)

1. Instructors

Name	Position	Department	Contact Information
KINUGASA Yusuke	Chief Instructor / Professor	Department of Gastrointestinal Surgery	kinugasa.srg1@tmd.ac.jp
TOKUNAGA Masanori	Associate Professor	Department of Gastrointestinal Surgery	tokunaga.srg1@tmd.ac.jp
KAWADA Kenro	Junior Associate Professor	Department of Gastrointestinal Surgery	kawada.srg1@tmd.ac.jp
SATO Yuya	Assistant Professor	Department of Gastrointestinal Surgery	yusatoh.srg1@tmd.ac.jp

2. Classroom/Lab Lecture Location

Please check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

In this course, we will study the clinical diagnosis and treatments for highly specialized gastrointestinal diseases that are difficult to diagnose and treat. The causes of gastrointestinal cancers as well as epidemiological examinations will also be studied.

4. Course Objectives

The objective of this course is to learn the clinical diagnosis and treatment of gastrointestinal diseases. Students will write a paper considering the physiological/molecular biological/pathological analysis, diagnosis, treatment and perioperative management of gastrointestinal lesions.

5. Format

With the instructors, clinical questions are discussed in small groups and presented in front of an audience. After debate, participants will format their research into a paper.

6. Class Detail

Our goals are to develop new methods of diagnosis and treatment for gastrointestinal diseases, contributing to society and progression in the medical field. Also, we hope to educate the next generation of young doctors in gastrointestinal and general surgery through comprehensive education and research, in a focused and proactive manner. Please see details below.

Conference: Every Monday and Thursday, 7:30 – 8:30 AM

Lecture, Seminar: Every Tuesday, 18:00 – 19:00 PM

Check the schedule announced at the beginning of the academic year for lectures and special lectures.

7. Assessment

An overall assessment comprising class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Course Prerequisites

Comprehension of basic surgical methods, diagnosis technologies, and an understanding of the diagnosis and treatment of gastrointestinal diseases is required.

9. Reference Materials

Japanese Classification of Esophageal Cancer: 11th edition: Part I. Japan Esophageal Society. Esophagus 2017,14(1):1-36.

Japanese Classification of Esophageal Cancer: 11th edition: Part II and III. Japan Esophageal Society. Esophagus 2017,14(1):37-65.

Japanese classification of colorectal carcinoma. Japanese Society for Cancer of the Colon and Rectum, Kanehara & Co., Ltd. Tokyo

Surgery of THE ANUS RECTUM & COLON. Michael RB Keighley & Norman S Williams, W.B Saunders London

Japanese gastric cancer treatment guidelines 2018 (ver.5) Japanese Gastric Cancer Association. Gastric Cancer 2021,24(1):1-21.

Japanese classification of gastric carcinoma: 3rd English edition Japanese Gastric Cancer Association. Gastric Cancer 2011,14:101–112.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: SATO Yuya, Chief, Department of Gastrointestinal Surgery

E-mail: yusatoh.srg1@tmd.ac.jp

(Secretary: Keiko Sakamoto, E-mail: secre.srg1@tmd.ac.jp)

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Be prepared to enter active discussions, be able to ask questions and be able to answer. No limit on participants.

Hepatobiliary Pancreatic Surgery (TMDU)

(Code : 4842, 1st – 2nd year, 4 units)

(Course ID: GS–c4842–S)

1. Instructors

Name	Position	Department	Contact Information
TANABE Minoru	Chief Instructor / Professor	Department of Hepatobiliary and Pancreatic Surgery	tana.msrg@tmd.ac.jp
KUDO Atsushi	Associate Professor	Department of Hepatobiliary and Pancreatic Surgery	kudomsrg@tmd.ac.jp
AKAHOSHI Keiichi	Assistant Professor	Department of Hepatobiliary and Pancreatic Surgery	akahoshi.msrg@tmd.ac.jp

2. Classroom/Lab Lecture

Check the venues announced at the beginning of the academic year.

3. Course Purpose and Outline

Through the study and treatment of hepatobiliary pancreatic diseases, students will learn and experience their specificity and intractability. Through clinical experiences and basic research, students will be able to identify the diseases' specificity and intractability, and contribute to the learning of junior students by giving presentations on their clinical experiences and research findings.

4. Course Objectives

To learn how to examine, diagnose and develop treatment plans for hepatobiliary pancreatic diseases, and be able to actively conduct surgery as either an operator or assistant. Students will engage in clinical and/or basic research, learn proactively in collaboration with the other specialist fields, and give presentations on their findings. Furthermore, students shall provide appropriate instruction for junior students regarding clinical and research activities.

5. Format

Small-group guidance, with opportunities for debate.

6. Course Details

Lectures on the biomolecular mechanisms of carcinogenesis, cancer growth, invasion and metastasis in digestive organs, especially the liver, biliary ducts and the pancreas; leading to molecular target therapy. In addition, general and advanced research on the diagnosis and treatment of the cancers will be explained, as well as clinical and basic research on liver transplantation.

HBP Conference: Every Monday, 16:00-18:00PM

Journal Club: Every Wednesday, 8:00 – 8:45 AM

Check the schedule announced at the beginning of the academic year for case conferences, research progress meetings, lectures and special lectures.

7. Assessment

An overall assessment comprising class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Besides knowledge of surgery and digestive surgery, comprehension of basic anatomy and physiology is required.

9. Reference Materials

None.

10. Language Used

All classes are given in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: TANABE Minoru, M.D., Ph.D. Department of Hepato-Biliary-Pancreatic Surgery

E-mail: bg-secre.msrg@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

Head and Neck Surgery

(Code : 4843, 1st – 2nd year, 4 units)

(Course ID: GS–c4843–S)

1. Instructors

Name	Position	Department	Contact Information
ASAKAGE Takahiro	Chief Instructor / Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
MORI Hiroki	Professor	Department of Plastic and Reconstructive Surgery	moriplas@tmd.ac.jp
TANAKA Kentaro	Professor	Department of Plastic and Reconstructive Surgery	kenta.plas@tmd.ac.jp
ARIIZUMI Yosuke	Junior Associate Professor	Department of Head and Neck Surgery	ariizumi.hns@tmd.ac.jp

2. Classroom/Lab Lecture

Check the venues announced at the beginning of the academic year.

3. Course Purpose and Outline

This course aims to develop excellent human resources as head and neck surgeons. For this purpose, the anatomy, pathology, diagnostic methods and treatment strategies of head and neck tumors will be covered. In addition, research will be conducted on new clinical techniques and clinical anatomy in order to contribute to the medical field of neck and head tumors. The course will be composed of lectures, clinical training and research.

4. Course Objectives

1. Understand the clinical characteristics of head and neck tumors.
2. Acquire diagnosis skills related to head and neck tumors through medical examinations, endoscopy and image inspection.
3. The ability to select suitable treatment methods.
4. Research and development on new knowledge regarding head and neck anatomy or treatment

5. Format

Small-group guidance, with opportunities for debate.

6. Course Details

This course chiefly deals with head and neck tumors, excluding intracranial and intra-orbital tumors. Lectures are focused on the clinical characteristics and pathogenesis of head and neck tumors. Furthermore, various treatment strategies for these tumors will be shown and explained.

Otolaryngology—Head and Neck Surgery Joint Conference: every Tuesday 7:45 – 9:00 AM

Check the schedule announced at the beginning of the academic year for research progress meetings, journal clubs, lectures and special lectures.

7. Assessment

An overall assessment comprising of participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Knowledge of general otorhinolaryngology and surgical oncology are required.

9. Reference Materials

None.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: ASAKAGE Takahiro, Department of Head and Neck Surgery,

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

Urology

(Code: 4844, 1st – 2nd year, 4 units)

(Course ID: GS–c4844–S)

1. Instructors

Name	Position	Department	Contact Information
FUJII Yasuhisa	Chief Instructor / Professor	Department of Urology	y-fujii.uro@tmd.ac.jp
MATSUOKA Yoh	Associate Professor	Department of Urology	yoh-m.uro@tmd.ac.jp
YOSHIDA Soichiro	Junior Associate Professor	Department of Urology	s-yoshida.uro@tmd.ac.jp

2. Classroom/Lab Lecture Location

Check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

Urology is a surgical specialty that focuses on the urinary tracts, and the male reproductive system. The organs covered by urology include the kidneys, adrenal glands, ureters, urinary bladder, urethra and the male reproductive organs (testes, epididymis, vas deferens, seminal vesicles, prostate and penis). Urology is closely related to, and in some cases overlaps with, diverse medical fields including oncology, nephrology, gynecology, andrology, neurology, pediatric surgery, gastroenterology and endocrinology. Minimally invasive surgery for urological disorders has been one of the most important topics in this field.

4. Course Objectives

By the end of this course, students shall understand the pathophysiology, means of diagnosis and treatment of various urological disorders, and be able to appropriately diagnose, treat and manage patients with these diseases. Students will also learn how to conduct surgery using the da Vinci surgical system, the global standard of robotic-assisted surgery, as well as gasless single-port RoboSurgeon surgery, one of the minimally invasive surgeries, that has been implemented in our department. Through basic and clinical research, students will make new findings which will lead to the improvement of oncological and functional outcomes as well as the QoL of patients with urological diseases.

5. Format

A small class where students will learn through mutual discussion.

6. Course Details

The urinary tracts and the male reproductive system are well controlled by the automatic and somatic nervous systems and the endocrine system. Students will learn about these modulating systems, the destruction of which will lead to various urologic symptoms and diseases. The etiology, diagnosis and treatment of urologic malignant diseases will also be covered.

Clinical Conference: Every Thursday 5:00 – 6:00 PM

Case Conference: Every Thursday 7:00 – 9:00 AM

Check the schedule announced at the beginning of the academic year for journal clubs, lectures and special lectures.

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

It is preferable to acquire basic knowledge of urologic diseases and basic research skills before admission.

9. Reference Materials

Kazunori Kihara edited, Gasless Single-Port RoboSurgeon Surgery in Urology, Springer
Kazunori Kihara edited, Gasless single-port retroperitoneoscopic surgery in urology : with robosurgeon in mind, Igaku Tosho Shuppan
CAMPBELL-WALSH UROLOGY, 12th EDITION, ELSEVIER
European Association of Urology Guidelines, <https://uroweb.org/guidelines/>

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 5:00 PM

Contact: FUJII Yasuhisa, Department of Urology

E-mail: y-fujii.uro@tmd.ac.jp Phone: 03-5803-5295

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 610 (4845) Surgery for Upper GI Cancer

(Code: 4845, 1st year, 4 units)

(Course ID: GS – c4845 – S)

1. Instructors

Name	Position	Department	Contact Information
Asada Methasate	Associate Professor Dr. (Chief instructor)	Division of General Surgery, Department of Surgery	asada.met@mahidol.ac.th
Vitoon Chinswangwatanakul	Associate professor Dr.	Division of General Surgery, Department of Surgery	Vitoon.chi@mahidol.ac.th
Thawatchai Akaraviput	Professor	Division of General Surgery, Department of Surgery	Thawatchai.aka@mahidol.ac.th
Jirawat Swangsri	Assistant Professor Dr.	Division of General Surgery, Department of Surgery	Jirawat.swa@mahidol.ac.th
Thammawat Parakonthon	Assistant Professor	Division of General Surgery, Department of Surgery	Thammawat.pha@mahidol.ac.th
Auttaporn Trakarnsanga	Associate Professor	Division of General Surgery, Department of Surgery	Auttaporn.tra@mahidol.ac.th
Chainarong Phalanusitthepha	Lecturer	Division of General Surgery, Department of Surgery	Chainarong.pha@mahidol.ac.th
Voraboot Taweerutchana	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture room, Division of General Surgery, Syamindra Building 12th floor

3. Course Purpose and Outline

To teach the student to understand the disease of upper GI cancer from the surgical viewpoint.

The surgery techniques and patient care will be included in this course.

4. Course objectives

At the end of the course, the participants will be able to :

1. Describe pathogenesis of important upper GI cancer
2. Describe investigation and surgical treatment of upper GI cancer
3. Describe how to approach upper GI cancer
4. Describe the surgery and techniques used in the treatment of upper GI cancer
5. Describe the pre and post operative care of the patients with upper GI cancer

5. Format

Lecture, seminars and conferences. All programs will be delivered in English.

6. Course Details

No.	Time	Topic/Details	Instructors
1	9.00-12.00 13:00-16:00	Upper GI cancer operation 1	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
2	9.00 – 12.00 13:00-16:00	Upper GI endoscopy 1	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
3	9.00 – 12.00	General surgery outpatient clinic 1	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
4	9.00-12.00 13:00-16:00	Upper GI cancer operation 2	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
5	9.00-12.00 13:00-16:00	Upper GI cancer operation 3	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
6	9.00 – 12.00 13:00-16:00	Upper GI endoscopy 2	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
7	9.00 – 12.00	General surgery outpatient clinic 2	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
8	9.00-12.00 13:00-16:00	Upper GI cancer operation 4	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
9	9.00-12.00 13:00-16:00	Upper GI cancer operation 5	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer

10	9.00 – 12.00 13:00-16:00	Upper GI endoscopy 3	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
11	9.00 – 12.00	General surgery outpatient clinic 3	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
12	9.00 12.00 13:00-16:00	Upper GI cancer operation 6	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
13	9.00 12.00 13:00-16:00	Upper GI cancer operation 7	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
14	9.00 – 12.00 13:00- 16:00	Upper GI endoscopy 4	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
15	9.00 12.00 13:00-16:00	Upper GI cancer operation 8	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
16	9.00 – 12.00 13:00- 16:00	Upper GI endoscopy 5	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
17	9.00 – 12.00	General surgery outpatient clinic 4	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer

18	9.00-12.00 13:00-16:00	Upper GI cancer operation 9	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
19	9.00-12.00 13:00-16:00	Upper GI cancer operation 10	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
20	9.00 – 12.00 13:00-16:00	Upper GI endoscopy 6	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
21	9.00 – 12.00	General surgery outpatient clinic 5	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
22	9.00 – 12.00 13:00-16:00	Upper GI endoscopy 7	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
23	9.00 – 12.00	General surgery outpatient clinic 6	Assoc.Prof.Dr. Asada Methasate,M.D. and All lecturer
24		Examination	

7. Assessment

Grades are determined based on lecture attendance and written and oral examination. Basic knowledge, surgery, patient care and attitude will be evaluated.

8. Prerequisite Reading

Reading materials will be announced and provided before the course.

9. Reference Materials

To be announced before the class.

11. Language used

All classes are conducted in English.

12. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Dr. Asada Methasate, Division of General Surgery,
Department of Surgery

E-mail: Asada.met@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

13. Note(s) to Students

The student who wish to continue his surgical career in upper GI cancer will have a chance to learn and understand upper GI cancer from basic knowledge to patient care. This is an elective course to be taken during joint Ph.D. program providing by Mahidol University.

This course is included in elective courses in joint Ph.D. program. Ph.D. student focusing in upper GI cancer is encouraged to take this course.

SISR 611 (4846) Surgery for Lower GI Cancer

(Code: 4846, 1st~2nd year, 4 units)

(Course ID: GS – c4846 – S)

1. Instructors

Name	Position	Department	Contact Information
Woramin Riansuwan	Chief Instructor/ Associate Professor	Division of General Surgery, Department of Surgery	woramin.ria@mahidol.ac.th
Varut Lohsiriwat	Professor Dr.	Division of General Surgery, Department of Surgery	Varut.loh@mahidol.ac.th
Siriluck Prapasrivorakul	Lecturer	Division of General Surgery, Department of Surgery	Siriluck.pra@mahidol.ac.th
Atthaphorn Trakarnsanga	Associate professor	Division of General Surgery, Department of Surgery	Atthaphorn.tra@mahidol.ac.th
Thammawat Parakonthon	Assistant Professor	Division of General Surgery, Department of Surgery	Thammawat.par@mahidol.ac.th
Voraboot Taweerutchana	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture room, Division of General Surgery, Syamindra Building 12th floor

3. Course Purpose and Outline

To teach the student to understand the disease of lower GI cancer from the surgical viewpoint.

The surgery techniques and patient care will be included in this course.

4. Course objectives

At the end of the course, the participants will be able to:

1. Describe pathogenesis of important lower GI cancer
2. Describe investigation and surgical treatment of lower GI cancer
3. Describe how to approach lower GI cancer
4. Describe the surgery and techniques used in the treatment of lower GI cancer
5. Describe the pre and post operative care of the patients with lower GI cancer

5. Format

Lecture, seminars and conferences. All programs will be delivered in English.

6. Course Details

No.	Date	Class Content	Instructor
1.	9:00-12:00	How to approach lower GI cancer	Woramin Riansuwan
2.	9:00-12:00	Pre and post operative care of lower GI cancer	Varut Lohsiriwat
3.	9:00-12:00	Important complications of lower GI cancer surgery	Atthaphorn Trakarnsanga
4.	9:00-12:00	Endoscopic treatment of Lower GI cancer	Thammawat Parakonthon
5.	9:00-12:00	Minimally invasive approach of lower GI cancer	Voraboot Taweerutchana

7. Assessment

Grades are determined based on lecture attendance and written and oral examination. Basic knowledge, surgery, patient care and attitude will be evaluated.

8. Prerequisite Reading

Reading materials will be announced and provided before the course.

9. Reference Materials

To be announced before the class.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Woramin Riansuwan, Division of General Surgery,
Department of Surgery

E-mail: woramin.ria@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

The student who wish to continue his surgical career in lower GI cancer will have a chance to learn and understand lower GI cancer from basic knowledge to patient care. This is an elective course to be taken during joint Ph.D. program providing by Mahidol university.

This course is included in elective courses in joint Ph.D. program. Ph.D. student focusing in lower GI cancer is encouraged to take this course.

SISR 612 (4847) Hepatobiliary Pancreatic Surgery (MU)

(Code: 4847, 1st~2nd year, 4 units)

(Course ID: GS – c4847 – S)

1. Instructors

Name	Position	Department	Contact Information
Yongyut Sirivatanauksorn	Chief Instructor/ Associate Professor Dr.	Division of General Surgery, Department of Surgery	yongyut.sir@mahidol.ac.th
Somchai Limsrichamrern	Assistant Professor	Division of General Surgery, Department of Surgery	somchai96@hotmail.com
Prawej Mahawithitwong	Associate Professor	Division of General Surgery, Department of Surgery	Prawej.mah@mahidol.ac.th
Prawat Kositamongkol	Assistant Professor	Division of General Surgery, Department of Surgery	prawat.kos@mahidol.ac.th
Chutwichai Tovikkai	Associate Professor	Division of General Surgery, Department of Surgery	chutwichai.tov@mahidol.ac.th
Wethit Dumronggittigule	Assistant Professor	Division of General Surgery, Department of Surgery	Wethit.dum@mahidol.ac.th
Pholasith Sangserestid	Lecturer	Division of General Surgery, Department of Surgery	Pholasith.san@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture: Division of General Surgery, 12th floor Syamindra Building, Siriraj Hospital

Ward round: Surgical ward, 7th floor 72th year Building, Siriraj Hospital

Operating theatre: 5th floor Syamindra Building, Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, students will be able to:

- Understand common diseases in the field of hepato-pancreato-biliary surgery
- Understand treatment and operations in treating HPB diseases
- Develop research questions relating to HPB diseases and their treatment.
- Generate idea in innovations relating treatment of HPB diseases

Obtain view of basic sciences including molecular biology and metabolomics methods in applying for research in HPB diseases

4. Course objectives

This course provides a general introduction to hepato-pancreato-biliary (HPB) surgery. Common HPB diseases as well as emergency HPB conditions will be thoroughly explored by means of lecture and clinical experience. Common HPB operations and procedures will be demonstrated through the course. Selected case studies will be discussed during group discussion. Integration of basic sciences including molecular biology and metabolomics methods to answer research questions relating to HPB diseases will also be covered in the course.

5. Format

- Lecture: essential topics in HPB surgery
- Clinical practice: participate in operating theatre, ward round and out-patient encounters in Hepato-Pancreato-Biliary and Transplant Surgery Unit, Siriraj Hospital
- Conference and journal club: presentation and participation in discussion
- Group discussion: in-depth discussion with supervisors

6. Course Details

Ward round (7th floor 72yr building): Monday - Friday 7.00-8.00

Operating theater (OR, 5th floor Syamindra building): Monday – Thursday 9.00-16.00

Grand round (12th fl Syamindra building): Friday 9.00-12.00

Conference and group discussion: to be announced

7. Assessment

Grades are based on attendance of lectures, performances on assignments, and levels of attitude, skills and knowledge

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read those materials beforehand.

9. Reference Materials

Jarnagin WR, Allen PJ, Chapman WC, D'Angelica MI, DeMatteo RP, Do RKG, Vauthey JN. Blumgart's Surgery of the Liver, Biliary Tract, and Pancreas. 6th Edition. Philadelphia, PA: Elsevier, 2017.

Further reference will be announced before class.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Dr. Yongyut Sirivatanauksorn, Division of General Surgery, Department of Surgery

E-mail: yongyut.sir@mahidol.ac.th Tel: +662-419-8005

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

The student who wish to continue his surgical career in lower GI cancer will have a chance to learn and understand lower GI cancer from basic knowledge to patient care. This is an elective course to be taken during joint Ph.D. program providing by Mahidol university.

This course is included in elective courses in joint Ph.D. program. Ph.D. student focusing in lower GI cancer is encouraged to take this course.

SISR 613 (4848) Vascular Surgery

(Code: 4848, 1st~2nd year, 4 units)

(Course ID: GS – c4848 – S)

1. Instructors

Name	Position	Department	Contact Information
Chumpol Wongwanit	Chief Instructor/ Associate Professor	Division of Vascular Surgery, Department of Surgery	Chumpol.won@mahidol.ac.th
Chanean Ruangsetakit	Associate Professor	Division of Vascular Surgery, Department of Surgery	Cheanean.rua@mahidol.ac.th
Pramook Mutirangura	Professor	Division of Vascular Surgery, Department of Surgery	Pramook.mut@mahidol.ac.th
Khamin Chinsakchai	Associate Professor	Division of Vascular Surgery, Department of Surgery	Khamin.chi@mahidol.ac.th
Nuttawut Sermathanasawadi	Associate Professor	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th
Suteekhanit Hahtapornsawan	Assistant Professor	Division of Vascular Surgery, Department of Surgery	Suteekhanit.hah@mahidol.ac.th
Kiattisak Hongku	Lecturer	Division of Vascular Surgery, Department of Surgery	kiattisak.hon@mahidol.ac.th
Nattawut Puangpunngam	Lecturer	Division of Vascular Surgery, Department of Surgery	Nattawut.pua@mahidol.ac.th
Tossapol Prapassaro	Lecturer	Division of Vascular Surgery, Department of Surgery	Tossapol.pra@mahidol.ac.th

Kanin Pruekprasert	Lecturer	Division of Vascular Surgery, Department of Surgery	Kanin.pru@mahidol.ac.th
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2. Classroom/Lab Lecture

Lecture: Division of Vascular Surgery, 13th floor Syamindra Building, Siriraj Hospital

Lab: 7th floor SIMR building

3. Course Purpose and Outline

1. Investigation and research for the social needs identification of Vascular Surgery in the next generation of medical area
2. Medical equipment and development of treatment to meet the needs of Vascular Surgery in the next generation of medical field
3. Research and development of the education curriculum and evaluation methods of Vascular Surgery in the medical field
4. Development and operation of Vascular Surgery of industry-academia cooperation in the medical field
5. Development and operation of technology certification strategy of Vascular Surgery treatment

4. Course objectives

1. To learn the advanced technology of vascular surgery in the medical field.
2. To study education of advanced technology, to master the interdisciplinary education technology.
3. To overcome the advanced technology, to learn a new treatment method and technology that the medical device can be proposed and developed.

5. Format

Clinical Practice: Surgical tours of the patient's disease, and vascular surgery participation in Siriraj Hospital.

To delve deeper into the problems through discussions with supervisors, make a paper through a small group discussion and presentations at a large number conference.

6. Course Details

Check with the teacher in charge for the program which is not specifically scheduled.

Lecture and conference:

As well as understanding the current status of vascular surgery in each area that is required to consider a vascular surgery treatment in the next generation, extracts the challenges for the future.

Available programs: every Monday, Wednesday and Friday 8.00-9.00

Practice :

To know the outline of the treatment through the case, to perform the acquisition of technology. State of the art technology to find the problem of the solution, for the treatment strategy, and exercises from the practical point of view.

Available programs:

Operating room every Monday- Thursday 9.00-15.00 at Operating room 504, 505

Ward round : every day except Thursday 7.00-8.00

Grand round : every Thursday 7.30-9.00

Lab :

Treatment methods for solving the problems of the vascular surgery, medical equipment, new developed educational method is verified through the animal laboratory and non-clinical trials and clinical trials, to create the paper.

Available programs: Research meeting: week 2 Friday 8.00-9.00

Date	Time	Topic/Details	Instructors
Fri 4 June 2021	9.00 - 12.00	Vascular outpatient clinic 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 10 June 2021	13.00 - 16.00	Vascular operation 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 11 June 2021	9.00 - 12.00	Vascular outpatient clinic 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

Fri 18 June 2021	9.00 - 12.00	Vascular outpatient clinic 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 10 June 2021	9.00 – 12.00	Vascular operation 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 7 June 2021	9.00 - 12.00	Vascular Ultrasonography 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 10 June 2021	13.00 - 16.00	Vascular operation 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 14 June 2021	9.00 - 12.00	Vascular Ultrasonography 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 17 June 2021	13.00 - 16.00	Vascular operation 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

Mon 21 June 2021	9.00 - 12.00	Vascular Ultrasonography 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 25 June 2021	9.00 - 12.00	Vascular outpatient clinic 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 24 June 2021	9.00 – 12.00	Vascular operation 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 28 June 2021	9.00 - 12.00	Vascular Ultrasonography 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 2 July 2021	9.00 - 12.00	Vascular outpatient clinic 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

Mon 5 July 2021	9.00 - 12.00	Vascular Ultrasonography 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 12 July 2021	9.00 - 12.00	Vascular Ultrasonography 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 9 July 2021	9.00 - 12.00	Vascular outpatient clinic 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 24 June 2021	13.00 - 16.00	Vascular operation 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 19 July 2021	9.00 - 12.00	Vascular Ultrasonography 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 1 July 2021	13.00- 16.00	Vascular operation 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

Fri 16 July 2021	9.00 - 12.00	Vascular outpatient clinic 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 8 July 2021	9.00 – 12.00	Vascular operation 8	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 23 July 2021	9.00 - 12.00	Vascular outpatient clinic 8	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 2 Aug 2021	9.00 - 12.00	Vascular Ultrasonography 8	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 9 Aug 2021	9.00 - 12.00	Vascular Ultrasonography 9	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Thu 15 July 2021	13.00 - 16.00	Vascular operation 9	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

Thu 22 July 2021	13.00 – 16.00	Vascular operation 10	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 30 July 2021	9.00 – 12.00	Vascular outpatient clinic 9	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Fri 6 Aug 2021	9.00 – 12.00	Vascular outpatient clinic 10	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
Mon 16 Aug 2021	9.00 – 12.00	Vascular Ultrasonography 10	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
		Examination	Assoc. Prof. Chumpol Wongwanit,M.D.

7. Assessment

Lectures, exercises, external announcement of participation and research content to the research training (conference, paper)

Based on the situation, it is evaluated as a guide to the following proportions. (PhD.)

Lectures, exercises, participation in research and training: 90%

External presentation of research (conference, paper) Status: 10%

8. Prerequisite Reading

None.

9. Reference Materials

None.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Chumpol Wongwanit, Division of Vascular Surgery,
Department of Surgery

E-mail: wchumpol@gmail.com Tel: +662-4198021

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 615 (4849) Multidisciplinary Approach to Disease of Head Neck and Breast

(Code: 4849, 1st~2nd year, 4 units)

(Course ID: GS – c4849 – S)

1. Instructors

Name	Position	Department	Contact Information
Suebwong Chutapisith	Associate Professor Dr.	Division of Head Neck and Breast, Department of Surgery	suebwong.chu@mahidol.ac.th
Pongthep Pisanthurakit	Lecturer	Division of Head Neck and Breast, Department of Surgery	Pongthep.pis@mahidol.ac.th
Waraporn Imruetaicharoenchoke	Lecturer Dr.	Division of Head Neck and Breast, Department of Surgery	Waraporn Imr@mahidol.ac.th
Pradit Rushatamukayanunt	Lecturer Dr.	Division of Head Neck and Breast, Department of Surgery	Pradit.rus@mahidol.ac.th
Mongkhol Boonsripithayanont	Lecturer	Division of Head Neck and Breast, Department of Surgery	Mongkhol.boo@mahidol.ac.th
Visnu Lohsiriwat	Lecturer	Division of Head Neck and Breast, Department of Surgery	Visnu.loh@mahidol.ac.th
Pradit Rushatamukayanunt	Lecturer Dr.	Division of Head Neck and Breast, Department of Surgery	Pradit.rus@mahidol.ac.th

2. Classroom/Lab Lecture

Check the venues announced at the beginning of the academic year.

3. Course Purpose and Outline

[Course Purpose]

Multidisciplinary approach to management of diseases of head neck and breast is crucial to better outcome. Multidisciplinary Treatment planning will be educated.

[Course Outline]

The student will experience clinical approaches to diseases of head neck and breast. Various aspect of management including radio-diagnostic procedures, surgical approaches and adjuvant loco-regional or systemic therapy will be discussed and experienced.

4. Course objectives

Because the team approaches are the paramount important tools toward better outcome in management of disease of head neck and breast. The students will be able to understand treatment plan for the patients.

5. Format

The course includes lectures, seminars, clinical attachment to outpatient department and operating theatre.

6. Course Details

Time	Topic/Details	Instructors
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 1	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 2	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 3	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 4	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 5	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 1	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff

8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 2	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 3	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 4	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 5	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Head neck and Breast surgery Grand round 1	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Head neck and Breast surgery Grand round 2	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Head neck and Breast surgery Grand round 3	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Head neck and Breast surgery Grand round 4	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
8.00 – 9.00	Head neck and Breast surgery Grand round 5	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
9.00 – 12.00	Head neck and Breast surgery outpatient clinic 1	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
9.00 – 12.00	Head neck and Breast surgery outpatient clinic 2	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
9.00 – 12.00	Head neck and Breast surgery outpatient clinic 3	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
9.00 – 12.00	Head neck and Breast surgery outpatient clinic 4	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
9.00 – 12.00	Head neck and Breast surgery outpatient clinic 5	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
13.00 – 16.00	Head neck and Breast surgery operation 1	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
13.00 – 16.00	Head neck and Breast surgery operation 2	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
13.00 – 16.00	Head neck and Breast surgery operation 3	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
13.00 – 16.00	Head neck and Breast surgery operation 4	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff
13.00 – 16.00	Head neck and Breast surgery operation 5	Assoc.Prof.Dr.Sueb Wong Chuthapisith and All Staff

7. Assessment

None.

8. Prerequisite Reading

None.

9. Reference Materials

None.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact:, Associate Professor Dr.Suebwong Chutapisith, Division of Head Neck and
Beast, Department of Surgery

E-mail: suebwong.chu@mahidol.ac.th

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 614 (4850) Urology

(Code: 4850, 1st~2nd year, 4 units)

(Course ID: GS – c4850 – S)

1. Instructors

Name	Position	Department	Contact Information
Sittiporn Srinualnud	Associate Professor	Division of Urology Surgery, Department of Surgery	Sittiporn.sri@mahidol.ac.th
Siros Jitpraphai	Lecturer	Division of Urology Surgery, Department of Surgery	Siros.jit@mahidol.ac.th
Varat Woranisakul	Lecturer	Division of Urology Surgery, Department of Surgery	Varat.wor@mahidol.ac.th
Chalairat Suk-ouichai	Lecturer	Division of Urology Surgery, Department of Surgery	Chalairat.suk@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture: Division of Urology Surgery, 12th floor Syamindra Building, Siriraj Hospital

Ward round: Urology ward, 7th (North) floor Chalermphrakiet Building, Siriraj Hospital

Operating theatre: 5th floor Syamindra Building, Siriraj Hospital

3. Course Purpose and Outline

At the end of the course, students will be able to:

- Understand common diseases in Urology
- Understand treatment and operations in Urology
- Develop research questions relating to Urology
- Generate idea in innovations relating treatment of Urology

4. Course objectives

This course provides a general knowledge in the disease and treatment of Urology

5. Format

- Lecture: essential topics in Urology
- Clinical practice: participate in operating theatre, ward round and out-patient
- Conference and journal club: presentation and participation in discussion
- Group discussion: in-depth discussion with supervisors

6. Course Details

Ward round (7th (North) floor Chalmphrakiet Building, Siriraj Hospital):

Monday – Friday 7.00-8.00

Operating theater (OR, 5th floor Syamindra building): Monday – Friday 9.00-16.00

Grand round Friday 8.00-9.00

Conference and group discussion: to be announced

7. Assessment

Grades are based on attendance of lectures, performances on assignments, and levels of attitude, skills and knowledge

8. Prerequisite Reading

When reading materials are distributed or specified in advance, participants are expected to read those materials beforehand.

9. Reference Materials

Campbell-Walsh Urology Edition 11th

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Napaporn Sukhasem, Department of Surgery

E-mail: NPK712@Gmail.com Tel: +662-419-8010

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

Stem Cell Regulation

(Code : 4861, 1st – 2nd year, 4 units)

(Course ID: GS—c4861—S)

1. Instructors

Name	Position	Department	Contact Information
TAGA Tetsuya	Chief Instructor / Professor	Department of Stem Cell Regulation	taga.scr@mri.tmd.ac.jp
TABU Kouichi	Junior Associate Professor	Department of Stem Cell Regulation	k-tabu.scr@mri.tmd.ac.jp
MUROTA Yoshitaka	Assistant Professor	Department of Stem Cell Regulation	muro.scr@mri.tmd.ac.jp

2. Classroom/Lab Lecture Location

Check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

The purpose of this course is for students to improve their ability to independently study stem cell regulations and applications through education and training about origins, properties and regulations of stem cells that function in tissue development, maintenance and regeneration. Through this course, students will comprehensively understand stem cells in normal and pathological conditions. The course will especially focus on neural stem cells, hematopoietic stem cells and cancer stem cells in view of cell-external cues from "niches" and cell-intrinsic cues such as epigenetic regulations.

4. Course Objectives

The objectives of this course are as follows: To help students absorb knowledge and research strategies necessary to understand and employ regulatory mechanisms of stem cell development, maintenance and fate determinations, particularly in neural stem cells, hematopoietic stem cells and cancer stem cells. To help students learn molecular biological, cell biological and histological methods for conducting research projects. To develop students' capacity to recognize problems by themselves, construct working hypotheses, design and perform experiments to solve them, properly discuss experimental results and report their research summaries in English.

5. Format

This course is set up for a small number of students to allow for more intense discussion and in-depth participation.

6. Class Detail

In order to understand tissue development and regeneration from biological and clinical viewpoints, it is important to study the molecular regulation of stem cell maintenance and fate specification. We place particular focus not only on normal tissue stem cells (e.g. neural and hematopoietic stem cells) but also on cancer stem cells, which will be discussed to consider the problem of cancer recurrence. We will refer to cell-extrinsic signals like growth factors in the niche and cell-intrinsic cues such as epigenetic modifications as cell fate regulatory elements.

Research Meeting: Every Friday 15:00 – 16:30 PM

Check the schedules announced at the beginning of the academic year for lectures and special lectures.

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Students should read advanced literature and papers published in international academic journals on stem cell regulations. They should also possess the necessary skills to run Word, Excel, and PowerPoint, which are used in lectures and practice.

9. Reference Materials

Molecular Biology of the Cell, fifth edition. Garland Science. 2008.

StemBook. Harvard Stem Cell Institute. 2008. (<http://www.ncbi.nlm.nih.gov/books/NBK27044/>)

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon: 11:00 AM – 12:00 PM (make an appointment by e-mail)

Contact: TAGA Tetsuya, Department of Stem Cell Regulation

E-mail address: taga.scr@mri.tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Participants are required to study on a voluntary basis.

Clinical Anatomy

(Code : 4862, 1st – 2nd year, 4 units)
(Course ID: GS—c4862—S)

1. Instructors

Name	Position	Department	Contact Information
AKITA Keiichi	Chief Instructor / Professor	Department of Clinical Anatomy	akita.fana@tmd.ac.jp
NIMURA Akimoto	Professor	Department of Clinical Anatomy	nimura.orj@tmd.ac.jp
HARADA Masayo	Assistant Professor	Department of Clinical Anatomy	harada.fana@tmd.ac.jp
MUROU Satoru	Assistant Professor	Department of Clinical Anatomy	muro.fana@tmd.ac.jp

2. Classroom/Lab Lecture Location

Check the locations announced at the beginning of the academic year.

3. Course Purpose and Outline

Clinical Anatomy is a field of study that involves solving problems in clinical medicine through formulations of human anatomical and developmental biological diagnoses and surgical procedures. This course is aimed at understanding the structure of the human body based on the human anatomy and acquiring the ability to describe the human body structures clearly from observational findings.

4. Course Objectives

The course is aimed at understanding the spatial arrangements of human body structures from various angles and acquiring powers of observation as a medical worker, researcher and student of clinical anatomy.

5. Format

Small group instruction to facilitate free discussion, based on actual findings, between participants and instructors.

6. Course Details

Clinical anatomy is vital for proper diagnosis and treatment. In this course, students will observe the structure of the human body from diversified perspectives, learn how to read anatomical maps, which are crucial for understanding anatomy, and study the basic composition of the human body. Comparative anatomy and developmental biology are also applied for a better understanding of the spatial arrangement of organs, vessels and more. Furthermore, viewpoints from clinical anatomy and local anatomy, the foundations of clinical anatomy, will be considered, as well as the anatomy of the lymphatic system, autonomous nervous system, fascial system and central nervous system.

Check the schedule announced at the beginning of the academic year for research progress meetings, journal clubs, graduate school lectures and graduate school special lectures.

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Reading should be completed to understand the basic anatomical structures and the developmental processes of the parts of the body that each student is interested in. Further, reading should be completed to pick up unclear or controversial issues on diagnoses and surgical procedures.

9. Reference Materials

Gray's Anatomy for Students, Third Edition, 2014, Elsevier, Langman's Medical Embryology, Thirteenth Edition, 2015, Wolters Kluwer Lippincott Williams & Wilkins, Principles of Development, Fourth Edition, 2011, Oxford University Press

10. Language used in class

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: AKITA Keiichi, Department of Clinical Anatomy

E-mail: akita.fana@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

No limit on number of participants.

Developmental and Regenerative Biology

(Code: 4863, 1st – 2nd year, 4 units)

(Course ID: GS—c4863—S)

1. Instructors

Name	Position	Department	Contact Information
NISHINA Hiroshi	Chief Instructor / Professor	Department of Developmental and Regenerative Biology	nishina.dbio@mri.tmd.ac.jp
KOFUJI Satoshi	Junior Associate Professor	Department of Developmental and Regenerative Biology	kofuji.dbio@mri.tmd.ac.jp
NAKANO Yasuhiro	Assistant Professor	Department of Developmental and Regenerative Biology	nakano.dbio@mri.tmd.ac.jp

2. Classroom/Lab Lecture Location

Check the venues announced at the beginning of the academic year.

3. Course Purpose and Outline

This course aims to facilitate acquisition of concepts and methods in cutting-edge biology and medicine.

4. Course Objectives

The objective of this course is for students to be able to discuss future developments by applying cutting-edge concepts and techniques to their research.

5. Format

The class size will be kept small, as either one-on-one or seminar format. Guidance for experiments will be provided individually.

6. Course Details

You will learn about mechanisms of signal transduction during “mouse and fish” development through lectures and small group discussions. Your goal is to obtain sufficient knowledge in this field to enable you to work on your research projects independently.

“Developmental and Regenerative Biology” seminar: Every Thursday 10:00 AM – 12:00 PM

Check the schedule announced at the beginning of the academic year for journal clubs, lectures, special lectures and seminars.

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Please gather your thoughts on what interests you, or what you find strange in life phenomena.

9. Reference Materials

Molecular Cell Biology 8th edition by Lodish et al.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: NISHINA Hiroshi, Department of Developmental and Regenerative Biology

E-mail: nishina.dbio@mri.tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None

Biomechanics

(Code: 4864, 1st – 2nd year, 4 units)

(Course ID: GS–c4864–S)

1. Instructors

Name	Position	Department	Contact Information
NAKAJIMA Yoshikazu	Chief Instructor / Professor	Department of Biomedical Information	nakajima.bmi@tmd.ac.jp
KAWASHIMA Kenji	Visiting Professor	Department of Biomechanics	kkawa.bmc@tmd.ac.jp
ONOGI Shinya	Associate Professor	Department of Biomedical Information	onogi.bmi@tmd.ac.jp
KAWASE Toshihiro	Assistant Professor	Department of Biomedical Information	kawase.bmi@tmd.ac.jp

2. Classroom/Lab Lecture Location

Department of Biomechanics, Institute of Biomaterials and Bioengineering 1F

3. Course Purpose and Outline

The purpose of this course is to learn the basic technologies of biomechanics, which is based on the study of body movements/structure from a mechanical point of view. The course will cover the basics of robotics, control engineering and statistical analysis. By the end of this course, students will be capable of advancing the research and development of medical devices, especially devices and systems for minimally invasive surgery.

4. Course Objectives

Students will acquire fundamental knowledge of biomechanics, and learn how to research and develop medical devices, especially devices and systems for minimally invasive surgery.

5. Format

The class size will be kept small, in order to focus on the acquisition of fundamental knowledge and skills.

6. Course Details

Learn about mechanical design and control engineering for medical devices based on biomechanics. Master the basic skills to develop devices through seminars by researchers and engineers working on medical devices and systems. Acquire basic knowledge of risk analysis and statistical analysis, which is required for evaluating robotic surgery systems.

Seminar: Every Monday 14:00 – 16:00 PM

Check the schedule announced at the beginning of the academic year for journal clubs, lectures, special lectures and seminars.

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

Basic knowledge of robotic surgery, mechanical and control engineering is recommended.

9. Reference Materials

None.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: NAKAJIMA Yoshikazu, Department of Biomedical Information

E-mail: nakajima.bmi@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

All students interested in medical devices and robotics are welcome.

Clinical Oncology

(Code : 4865, 1st – 2nd year: 4 units)

(Course ID: GS–c4865–S)

1. Instructors

Name	Position	Department	Contact Information
MIYAKE Satoshi	Chief Instructor / Professor	Department of Clinical Oncology	sm.conc@tmd.ac.jp

2. Classroom/Lab Lecture Location

Daigakuin Kogishitsu 3, M&D Tower 11F

3. Course Purpose and Outline

To provide an overview of the field of clinical oncology by acquiring systematic knowledge of palliative medicine, medical oncology and comprehensive cancer examination and treatment.

4. Course Objectives

1. To acquire comprehensive knowledge of oncology and the skills to explain it to others.
2. To facilitate discussion in the field of multi-disciplinary collaboration.
3. To acquire knowledge regarding methods to improve patients' QOL, and to be able to put them to practice.

5. Format

Class sizes are kept small to facilitate discussion and communication.

6. Class Detail

To be able to provide cross-sectional cancer examinations that take biological profiles, clinical and social medicine as well as cultural aspects into account, in addition to traditional organ-specific cancer diagnosis. While focusing on palliative medicine and cancer chemotherapy, students will learn about regional collaboration and team medical care, equipping them to become future leaders of comprehensive cancer examination and treatment.

Check the schedule announced at the beginning of the academic year for research progress meetings and journal clubs.

Conferences:

Monday 17:00 PM: Palliative care team conference

Thursday 18:00 PM – 19:00 PM: every third Thursday = Cancer board, every first, second and fourth Thursday = Genome cancer board

7. Assessment

An overall assessment comprising of class participation (knowledge and understanding of the specialty field, content of presentations and Q&A) (50%) and involvement in research (50%) will be made.

8. Prerequisite Reading

None.

9. Reference Materials

Oxford Textbook of Palliative Medicine

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYAKE Satoshi, Department of Clinical Oncology,

E-mail: sm.conc@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

It is expected that anyone who is interested in the field of oncology will participate actively.

SISR 617 (4866) Principles in Systems Pharmacology

(Code: 4866, 1st~2nd year, 4 units)
(Course ID: GS-c4866-S)

1. Instructors

Name	Position	Department	Contact Information
Chief Instructor: Somponnat Sampattavanich	Lecturer	Department of Pharmacology	Somponnat.sam@mahidol.ac.th

2. Classroom/Lab Lecture

Lecture

Lecture Room 1119, Department of Pharmacology

3. Course Purpose and Outline

Systems-level reasoning of complex biological processes; advanced omics techniques for systems pharmacology research; Basics in handling big data from omics measurement; Computational concepts in biomolecular dynamics, signaling cascades, feedback regulations and biological noises.

4. Course objectives

By the end of the course, participants will be able to understand principles of systems pharmacology and research, ranging from data gathering to computational biology.

5. Format

Lectures, group discussion, report presentation

All programs will be conducted in English.

All class activities will be provided in an online format via Moodle platform

6. Course Details

No.	Date	Time	Topic	Lecturer
Module I: Quantitative foundations for systems pharmacology				
1		09.00-12.00	What is systems approach + MATLAB tutorial	Somponnat
2		09.00-12.00	Mathematical representation of biological systems	Somponnat
3		09.00-12.00	Rate law and basic biomolecular dynamics	Somponnat
Module II: Mechanistic approach				
4		09.00-12.00	Michaelis Menten kinetics, avidity and cooperativity	Somponnat
5		09.00-12.00	Solving dynamic models: ode solvers	Somponnat
6		09.00-12.00	Stability and noise in biology	Somponnat
7		09.00-12.00	Important network motifs and synthetic biology	Pakpoom(Naresuan)
		09.00-12.00	Exam SIPM508 (I): 1 - 7	Faculty
Module III: Data-driven approach				
8		09.00-12.00	Graph Theory basics	Metha
9		09.00-12.00	Surveying complex biological systems	Siwanon
10		09.00-12.00	Important databases and basics of data mining	Sira(CU)
11		09.00-12.00	Building regression models	Metha

Module IV: Applications in Pharmacology

12		09.00-12.00	PK/PD modeling	Dr.Paul
13		09.00-12.00	Cancer drug discovery	Siwanon
14		09.00-12.00	Precision Medicine	Manop
15		09.00-12.00	Student Projects	Faculty
		09.00-12.00	Exam SIPM508 (II): 8 - 14	Faculty

7. Assessment

Scoring

Exam 50%

Student Project 40%

Attendance 10%

Grade

A more than 80

B+ between 75-79

B between 70-74

Criterion-reference grading

A = 80 points or more

B+ = 70 - 79.99 points

B = 60 - 69.99 points

C = 50 - 59.99 points

D = 40 - 49.99 points

F = 0 - 39.99 points

8. Prerequisite Reading

When reading materials are given or specified in advance, participants are expected to study those materials before attending the class.

9. Reference Materials

To be announced before individual classes

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Lecturer Somponnat Sampattavanich, Department of Pharmacology

Email : Somponnat@gmail.com

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

SISR 618 (4867) Stem cell science

(Code: 4867, 1st~2nd year, 4 units)

(Course ID: GS – c4867 – S)

1. Instructors

Name	Position	Department	Contact Information
Nuttawut Sermsathanasawadi	Chief Instructor/ Associate Professor Dr.	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th
Nuttapol Chruewkamlow	Researcher	Division of Vascular Surgery, Department of Surgery	nuttapol.chr@mahidol.edu

2. Classroom/Lab Lecture

Laboratory Room, SiMR 5th Floor and Laboratory Room Srisavarindhira 10th Floor, Faculty of Medicine Siriraj hospital, Mahidol University

3. Course Purpose and Outline

Comprehensive view of the stem cell biology, the potential uses of stem cell in clinical practices, stem cell biology of both embryonic and adult stem cells including characteristics at cellular and molecular levels, signaling transduction, stem cell interactions with their microenvironment and their role in tissue homeostasis, basic technology involving in stem cell research, hematopoietic stem cell transplantation as a standard treatment for hematological disorders, potential uses and limitations of stem cells for the treatment of diseases other than hematological disorders, ethics in animal care and use for research and ethical issues of stem cell applications

4. Course objectives

By the end of the course, participants will be able to:

1. Scientific principles which underlie stem cell biology and regulation of stem cells and human diseases connected to stem cell biology.
Describe various types of stem cells in the human body and their
2. potential applications in regenerative medicine.
Understand the clinical, ethical and regulatory aspects of the
3. applications of stem cell therapy.

4. Learn laboratory techniques that could be used in stem cell research.
5. Demonstrate a group working and responsibility for work assigned.
6. Demonstrate effective communication skills for scientific presentation.
7. Identify and critically address a scientific question in regenerative medicine.

5. Format

Lectures, group discussion, report presentation

All programs will be conducted in English.

All class activities will be provided in an online format via Moodle platform

6. Course Details

No.	Date	Time	Topic/Details	Instructors
1	Thu 07-01-2021	13.00-16.00	Introduction to Laboratory	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
2	Fri 08-01-2021	13.00-16.00	Basic Lab Instruments and Equipments	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
3	Thu 14-01-2021	13.00-16.00	Basic Lab Instruments and Equipments	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
4	Fri 15-01-2021	13.00-16.00	Basic Lab Instruments and Equipments	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
5	Thu 21-01-2021	13.00-16.00	Basic Lab Instruments and Equipments	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
6	Fri 22-01-2021	13.00-16.00	Good Lab Practice	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
7	Thu 28-01-2021	13.00-16.00	Blood Perfusion and Laser Doppler	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
8	Fri 29-01-2021	13.00-16.00	Blood Perfusion and Laser Doppler	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
9	Thu 04-02-2021	13.00-16.00	Basic Cell Culture	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi

10	Fri 05-02-2021	13.00-16.00	Basic Cell Culture	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
11	Thu 11-02-2021	13.00-16.00	Basic Flow Cytometry	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
12	Fri 12-02-2021	13.00-16.00	Basic Flow Cytometry	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
13	Thu 18-02-2021	13.00-16.00	Hand on operation Flow Cytometer	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
			Midterm Examination Presentation	
14	Fri 19-02-2021	13.00-16.00	QQMNC cultivation	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
15	Thu 25-02-2021	13.00-16.00	Phenotypic and characterization of Cells	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
16	Fri 26-02-2021	13.00-16.00	Apoptosis test by Flowcytometry	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
17	Thu 04-03-2021	13.00-16.00	Colony forming assay	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
18	Fri 05-03-2021	13.00-16.00	Tube formation	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
19	Thu 11-03-2021	13.00-16.00	Insight of Confocal Microscopy	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
20	Fri 12-03-2021	13.00-16.00	IPS Derived EPC	Dr.Nuttapol Chruewkamlow,
21	Thu 18-03-2021	13.00-16.00	IPS Derived EPC	Dr.Nuttapol Chruewkamlow,
22	Fri 19-03-2021	13.00-16.00	IPS Derived EPC	Dr.Nuttapol Chruewkamlow,
23	Thu 25-03-2021	13.00-16.00	IPS Derived EPC	Dr.Nuttapol Chruewkamlow,

24	Fri 26-03-2021	13.00-16.00	Lab Discussion	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
25	Thu 01-04-2021	13.00-16.00	Lab Discussion	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
26	Fri 02-04-2021	13.00-16.00	Lab Discussion	Dr.Nuttapol Chruewkamlow, Assoc.Prof.Dr. Nuttawut Sermsathanasawadi
			Final Examination	

7. Assessment

Scoring

Direct observation	60%
Case Presentation	40%

8. Prerequisite Reading

When reading materials are given or specified in advance, participants are expected to study those materials before attending the class.

9. Reference Materials

To be announced before individual classes

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Associate Professor Dr.Nuttawut Sermsathanasawadi, Division of Vascular Surgery, Department of Surgery

Email: Nuttawut.ser@mahidol.ac.th Tel +662-4198021

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

None.

Experiments and Thesis Writing at TMDU

(Code: 4870, 2nd – 4th year, 24 units)

(Course ID: GS—c4870—T)

1. Instructors

As stated in the accompanying sheet

2. Classroom/Lab Lecture

The lecture room may vary according to the program or classroom event.

Consult with your instructor regarding the appropriate research laboratory or research guidance room before attending the lecture.

3. Course Purpose and Outline

Each student will explore a specific research topic in the specialized surgical field or in the field of medical science related to surgery of his/her own initiative. To help students write highly original and practical dissertations on the results of their research based on scientific grounds, instructors at both universities will instruct them using various methods such as a video conference system and e-mail meetings.

4. Course Objectives

Each student explores a specific research topic of his/her own initiative and writes a dissertation on the results of the research. Participants are to complete their dissertation in order to be assessed for their degree and evaluation through final examination.

5. Format

Classes are conducted in small groups.

6. Course Description and Timetable

- Experiments and data collection
- Data analysis
- Evaluating the adequacy of data collection and data analysis
- Writing a dissertation and preparing a dissertation presentation

7. Assessment

Students are graded according to their dissertation presentation and the assessment of it towards their degree.

8. Prerequisite Reading

None

9. Reference Materials

None

10. Language Used

All classes are conducted in English.

11. Office Hours

Please contact the chief instructor and associate instructor. Problems that emerge in carrying out research will be addressed by the program steering committee.

12. Note(s) to Students

None

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SISR 799 (4871) Experiments and Thesis Writing at MU

(Code: 4871, 2nd – 4th year, 24 units)

(Course ID: GS – c4871 – T)

1. Instructors

As stated in the accompanying sheet

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8. Prerequisite Reading

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9. Reference Materials

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10. Language Used

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11. Office Hours

Please contact the chief instructor and associate instructor. Problems that emerge in carrying out research will be addressed by the program steering committee.

12. Note(s) to Students

None

7. Campus/Access Map

