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 credtis 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 credtis 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

<table>
<tr><th colspan="3">Tokyo Medical and Dental University</th><th colspan="3">Mahidol University</th><th rowspan="2">Standards for Specific Behavioral Objectives (SBOs)</th></tr>
<tr><th>GP</th><th colspan="2">Assessment</th><th>GP</th><th colspan="2">Assessment</th></tr>
<tr><td rowspan="2">4.0</td><td rowspan="2">A+</td><td rowspan="2">Superior</td><td>4.0</td><td>A</td><td>Excellent</td><td rowspan="2">All SBOs were achieved beyond expectation.</td></tr>
<tr><td>3.5</td><td>B+</td><td>Very Good</td></tr>
<tr><td>3.5</td><td>A</td><td>Excellent</td><td>3.0</td><td>B</td><td>Good</td><td>All SBOs were achieved.</td></tr>
<tr><td>3.0</td><td>B</td><td>Good</td><td>2.5</td><td>C+</td><td>Fairly Good</td><td>Most SBOs were achieved.</td></tr>
<tr><td>2.0</td><td>C</td><td>Fair</td><td>2.0</td><td>C</td><td>Fair</td><td>The minimum SBOs necessary were achieved.</td></tr>
<tr><td rowspan="2">1.0</td><td rowspan="2">D</td><td rowspan="3">Failing</td><td>1.5</td><td>D+</td><td>Poor</td><td rowspan="2">The minimum SBOs necessary were not achieved.</td></tr>
<tr><td>1.0</td><td>D</td><td>Very Poor</td></tr>
<tr><td>0.0</td><td>F</td><td>0</td><td>F</td><td>Failing</td><td>Unable to evaluate based on insufficient SBOs.</td></tr>
</table>

Category		Course ID	Code	Subjects		Chief Instructor	Compulsory /Elective	Credits		Lecture/ Practice/ Laboratory activities	E-Learning available	Required credits
				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. Toshifumi Kudo	CE	2		P		7
		GS－c4802－S	4802	臨床基幹科目Ⅰ(MU)	**Clinical Core Subject I (MU)**	Assoc.Prof.Dr.Vitoon Chinswangwatanakul	CE		2	P		
		GS－c4803－S	4803	臨床基幹科目Ⅱ	Clinical Core Subject II	Prof.Kudo/ Assoc.Prof.Dr.Vitoon	C	5		P		
Ⅱ	臨床統計・情報医科学関連専門科目 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	○	4 4 credits either at TMDU or MU
		GS－c4811－L	4811	疫学	**Epidemiology**	Assoc. Prof. Nobutoshi Nawa	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.Dr. Cherdsak Iramaneerat	E		2	L	○	
		GS－c4814－L	4814	生物医学統計概論	**Biostatistics in Biomedicine**	Assit.Prof.Dr. 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. Takehiko Mori	E	1		L	○	5 2 or more credits at TMDU and 2 or more credits at MU
		GS－c4821－L	4821	低侵襲がん治療Ⅰ	**Minimal Invasive Treatment for Cancer I**	Prof. Takehiko Mori	E	1		L	○	
		GS－c4822－L	4822	低侵襲がん治療Ⅱ	**Minimal Invasive Treatment for Cancer II**	Prof. Masahiko Miura	E	1		L	○	
		GS－c4823－L	4823	臓器別がん	**Organ-specialized Cancer**	Prof. Takehiko Mori	E	1		L	○	
		GS－c4824－L	4824	小児・希少がん	**Pediatric and rare cancers**	Prof. Takagi Masatoshi	E	1		L	○	
		GS－c4825－L	4825	臨床腫瘍学	**Advanced Clinical Oncology**	Prof. Takehiko Mori	E	1		L	○	
		GS－c4826－L	4826	がんゲノム	**Cancer genomics and precision medicine**	Prof. Sadakatsu Ikeda	E	1		L	○	
		GS－c4827－L	4827	緩和ケア・緩和医療学	**Palliative Medicine: Outline**	Prof. Takehiko Mori	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**	Assit.Prof.Dr. Pradit Rushatamukayanunt	E		1	L	○	
		GS－c4829－L	4829	幹細胞治療学概論	**Stem cell for Surgical Patient**	Assoc.Prof.Dr. Nuttawut Sermsathanasawadi	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**	Assoc.Prof. Sittiporn Srinualnad	E		1	L	○	
		GS－c4833－L	4833	基礎鏡視下手術概論	**Basic Surgical Endoscopy**	Assit.Prof.Dr.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.Dr.Thawatchai Akaraviput	E		1	L	○	
		GS－c4835－L	4835	周術期患者管理学概論	**Perioperative Care Surgical Patient**	Prof.Dr.Varut Lohsiriwat	E		1	L	○	
		GS－c4836－L	4836	婦人科がん治療学概論	**Gynecologic Cancer Therapy**	Assoc.Prof. Perapong Inthasorn	E		1	L	○	
Ⅳ	研究基幹科目 Research core subjects (8) 外科系専門分野 Surgery (4-8)	GS－c4840－S	4840	総合外科学特論	**Specialized Surgeries**	Assoc. Prof. Kentaro Okamoto	E	4		P	○	8 8 credits either at TMDU or MU
		GS－c4841－S	4841	消化管外科学特論	**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－c4851－S	4851	婦人科腫瘍学特論（TMDU）	**Gynecologic Oncology (TMDU)**	Prof. Naoyuki Miyasaka	E	4		P	○	
		GS－c4845－S	4845	上部消化管外科学特論	**Surgery for Upper GI Cancer**	Clinical Prof.Dr. Asada Methasate	E		4	P	○	
		GS－c4846－S	4846	下部消化管外科学特論	**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)**	Prof.Dr. 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	**Multidiciplinary Approach to Desease of Head Neck and Breast**	Assoc.Prof.Dr. 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	○	
		GS－c4852－S	4852	婦人科腫瘍学特論（MU）	**Gynecologic Oncology (MU)**	Assoc.Prof. Perapong Inthasorn	E		4	P	○	
	研究基幹科目 Research core subjects (8) 外科系関連医科学分野 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. Yasuo Hamamoto	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	幹細胞科学特論	**Stem Cell Science**	Assoc.Prof.Dr. Nuttawut Sermsathanasawadi	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		48
		GS－c4871－T	4871	研究実践と論文作成（MU）	**Experiments and Thesis writing at MU**	Assoc.Prof.Dr. Vitoon Chinswangwatanakul	C		24	LA		48
												72

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.

<table>
<tr><th>Place</th><th>Items</th><th>Service hours</th><th>Office</th></tr>
<tr><td rowspan="2">Document vending machine
Bldg. 5, 4th floor
Student Lounge</td><td>Certificate of Enrollment (Japanese)</td><td rowspan="2">8:30-21:00
(Student ID card is required.)</td><td rowspan="2">Thesis and Dissertation Team, Educational Planning Section
TEL：5803-5074</td></tr>
<tr><td>Student Discount Card for JR</td></tr>
<tr><td rowspan="4">JD & MPH Unit, International Exchange Section*
Bldg. 1, 4th floor</td><td>Certificate of Enrollment (English)</td><td rowspan="4">8:30-17:15</td><td rowspan="4">JD & MPH Unit, International Exchange Section
TEL：5803-4678</td></tr>
<tr><td>Transcript (Japanese/English)</td></tr>
<tr><td>Certificate of Expected Graduation <Master’s Program> (Japanese/English)</td></tr>
<tr><td>Other certificates (Japanese/English)</td></tr>
<tr><td>Educational Planning Section*
Bldg. 1, 1st floor
Educational Planning Section*
Bldg. 1, 1st floor</td><td>Certificate of Expected Graduation <Doctoral Program> (Japanese/English)</td><td>8:30-17:15</td><td>Thesis and Dissertation Team, Educational Planning Section
TEL：5803-5074</td></tr>
</table>

*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/cmn/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.

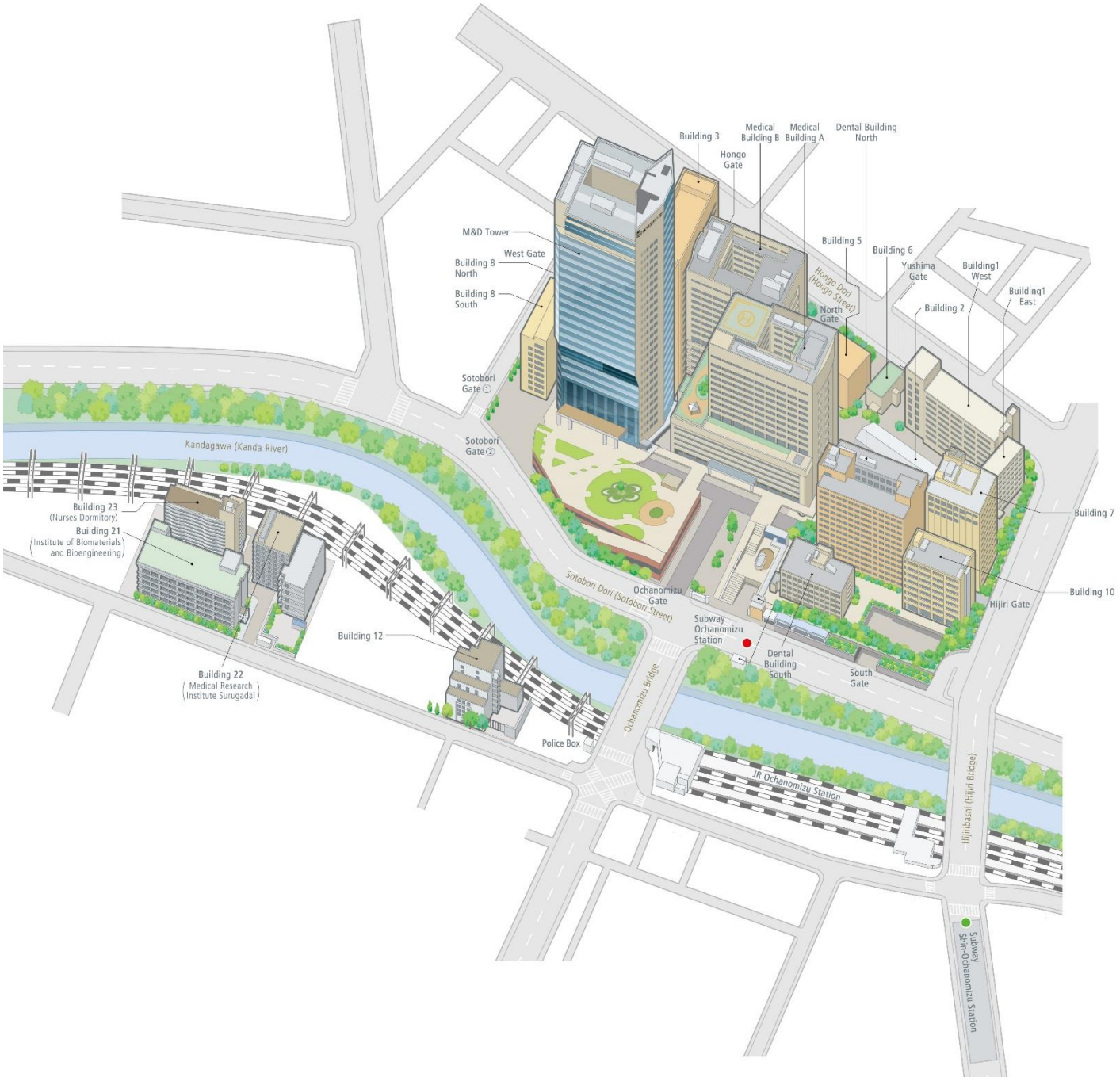
(3) Relevant Offices

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
KUDO Toshifumi	Professor	Department of Cardiovascular Surgery	t-kudo.srg1@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

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. Clinical practice is limited to the ranges allowed by Japanese law.

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 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.
- Course content varies depending on the department. For more information, please contact individual instructor listed below.

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. Clinical meetings, such as case conferences, are conducted in Japanese, but are explained in English when appropriate.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: KUDO Toshifumi, Department of Cardiovascular Surgery, Div. of Vascular Surgery
E-mail: t-kudo.srg1@tmd.ac.jp
KINUGASA Yusuke, Department of Gastrointestinal Surgery
E-mail: kinugasa.srg1@tmd.ac.jp
ASAKAGE Takahiro, Department of Head and Neck Surgery
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.

SIMS 601 Clinical Core Subject I (MU)

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

(Course ID: GS-c4802-S)

1. Instructors

NAME	DEPARTMENT	CONTACT INFORMATION
Chief instructor Associate professor Dr. Vitoon Chinswangwatanakul, M.D.	Department of Surgery, Division of General Surgery	Vitoon.chi@mahidol.ac.th
Associate Professor Dr. Asada Methasate, M.D.	Department of Surgery, Division of General Surgery	Asada.met@mahidol.ac.th
Assistant Professor Perapong Inthasorn, M.D.	Gynecologic Oncology Department of Obstetrics and Gynaecology	perapong_i@hotmail.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:

Assoc.Prof.Vitoon Chinswangwatanakul, MD., Ph.D.
Division of General Surgery, Department of Surgery
E-mail: vchinswa@gmail.com

Assoc.Prof.Suebwong Chuthapisith. MD., Ph.D.
Division of Head-Neck and Breast Surgery, Department of Surgery
Email: Suebwong.chu@mahidol.ac.th

12. Note(s) to Students

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

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
KUDO Toshifumi	Professor	Department of Cardiovascular Surgery	t-kudo.srg1@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
MORI Hiroki	Professor	Department of Plastic and Reconstructive Surgery	moriplas@tmd.ac.jp
TANAKA Kentaro	Professor	Department of Reconstructive Plastic Surgery	kenta.plas@tmd.ac.jp
Vitoon Chinswangwatanakul	Chief Instructor/Associate Professor	Division of General Surgery, Department of Surgery	Vitoon.chi@mahidol.ac.th
Pornprom Muangman	Professor	Traumatology Surgery	Pornprom.mua@mahidol.ac.th
Asada Methasate	Associate Professor	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	Division of Head Neck and Beast, Department of Surgery	suebwong.chu@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:

KINUGASA Yusuke, Department of Gastrointestinal Surgery
E-mail: kinugasa.srg1@tmd.ac.jp
ASAKAGE Takahiro, Department of Head and Neck Surgery
E-mail: tasakage.hns@tmd.ac.jp
FUJII Yasuhisa, Department of Urology
E-mail: y- fujii.uro@tmd.ac.jp
KUDO Toshifumi, Department of Specialized Surgeries
E-mail: t-kudo.srg1@tmd.ac.jp
MORI Hiroki, Department of Plastic and Reconstructive Surgery
E-mail: moriplas@tmd.ac.jp
TANAKA Kentaro, Department of Reconstructive Plastic Surgery
E-mail: kenta.plas@tmd.ac.jp
Vitoon Chinswangwatanakul, Division of General Surgery, Department of Surgery
E-mail: Vitoon.chi@mahidol.ac.th
Pornprom Muangman
E-mail: Pornprom.mua@mahidol.ac.th
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
Chongdee Aojanepong, Division of Plastic Surgery, Department of Surgery
E-mail: Chongdee.aoj@mahidol.ac.th

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.

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
OKADA Takuya	Associate Professor	Department of Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
FUJIWARA Takeo	Professor	Department of Public Health	fujiwara.hlth@tmd.ac.jp

2. Classroom/Lab Lecture Location

The lecture classes will be conducted either in an onsite classroom at Ochanomizu Campus and/or by ZOOM (web remote lecture system). ZOOM ID/PWD will be notified by e-mail from Graduate Education Team 1 to the registered students. Students are required to attend class on time.

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:

1) Describe the roles and responsibilities of public health in disease prevention
2) Describe development in basic, clinical, and public health research using data science
3) Describe theory and application of implementation medical science
4) Describe and apply the basic principles and methods of medical research to disease prevention
5) Describe the main ethical issues in international medical research
6) Describe cross-border health issues in relation to globalization
7) Describe history of medical research
8) Describe leadership in medical education and medical research

5. Lecture Style

Lectures, group discussions, and team projects. All programs are conducted in English.
International students and Japanese students attend the same class and use English in the classroom.
Students from the Medical and Dental Science or Biomedical Science departments are both welcome to the course.
Attendance on time (synchronous learning) is the default style of attending class.

6. Course Details

No	Date	Time	Theme
1	November 5	16:00-19:10	Implementation medical science in the context of global health
2	November 12	8:50-12:00	Health Promotion
3	November 26	16:00-19:10	Prevention and control of communicable disease
4	December 3	16:00-19:10	Prevention and control of tropical disease
5	December 10	16:00-19:10	Prevention and control of non-communicable disease and implementation science
6	December 17	16:00-19:10	Prevention and control of cancer
7	January 14	16:00-19:10	History of Anatomy and Body donation
8	January 21	16:00-19:10	Leadership

7. Grading System

Grades are based on attendance at lectures, performances during group discussions and team project as well as 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

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

10. Language Used

All classes are conducted in English.

11. Office Hours

Please contact Prof. Keiko Nakamura at nakamura.ith@tmd.ac.jp

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 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
NAWA Nobutoshi	Chief Instructor / Associate Professor	Department of Public Health	nawa.ioe@tmd.ac.jp
FUJIWARA Takeo	Professor	Department of Public Health	fujiwara.hlth@tmd.ac.jp
NISHIMURA Hisaaki	Assistant Professor	Department of Public Health	nishimura.hlth@tmd.ac.jp
YU PAR KHIN	Specially Appointed Assistant Professor	Department of Public Health	yukhin.hlth@tmd.ac.jp

2. Classroom/Lab Lecture Location

G-Lab, M&D Tower 8F

3. Course purpose and Outline

Course Purpose

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.

Outline

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:

a) Measure disease for behavior
b) Appraise published paper critically
c) Write reviewer comments
d) Desing epidemiological study to address public health issue

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	Lecture: Measurement and Sampling (1)
2	Lecture: Measurement and Sampling (2)
3	Lecture: Measurement and Sampling (3)
4	Group work A (field work and presentation): Measurement and Sampling
5	Study designs and Confounder(1)
6	Study designs and Confounder(2)
7	Study designs and Confounder(3)
8	Group discussion: Critical Appraisal
9	Exam: Writing a Review Comment
10	Comments on answers: Writing a Review Comment
11	Group work B (preparation): Drafting a Research Proposal for a Public Health Issue (1)
12	Group work B (preparation): Drafting a Research Proposal for a Public Health Issue (2)
13	Lecture: Advanced Epidemiology to Apply for the Real World (1)
14	Lecture: Advanced Epidemiology to Apply for the Real World (2)
15	Group work B (group presentation): Drafting a Research Proposal for a Public Health Issue (1)
16	Group work B (group presentation): Drafting a Research Proposal for a Public Health Issue (2)

7. Assessment

Grades will be based on the following elements:

1. Attendance 10%
2. Group Presentation A (sampling and measurement) 20%
3. Group Presentation B (public health action/research proposal) 30%
4. Exam (critical appraisal) 40%

8. Prerequisite Reading

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

9. Reference Materials

Gordis L. Epidemiology: with student consult. 5th edition. Philadelphia: Elservier; 2013
Szklo M, Nieto EJ, Epidemiology: Beyond the Basics. 3rd edition, Jones & Bartlett Learning; 2012
Rothman KJ, Greenland S, Lash T. Modern Epidemiology. LWW; 2012

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM
Contact: NAWA Nobutoshi, Department of Public Health
E-mail: nawa.ioe@tmd.ac.jp
Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Instructor's permission is required before registering to the course. Also, students are required to have TOEFL iBT with a minimum score of 80 or IELTS with a minimum score of 6.5.
Please bring your laptop for group works and exam.

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

On-demand (via WebClass)

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 (online video). Q&A system on webclass or some optional hours will be prepared. There will be some homework assignments, and examination/reports. (Details will be announced later.)

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: Estimation
7	Lecture: Comparing groups - continuous data (1)
8	Lecture: Comparing groups - continuous data (2)
9	Lecture: Comparing groups - categorical data
10	Lecture: Analysis of Variance; Multiple comparison
11	Lecture: Correlation; linear regression
12	Lecture: Multivariate analysis (1)
13	Lecture: Multivariate analysis (2)
14	Lecture: Multivariate analysis (3)
15	Lecture: Survival analysis
16	Final Exam

7. Assessment

Grades will be based on the following elements:
Participation 20%
Homework exercise 30%
Final examination/report 50%

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.
Altman DG. Practical Statistics for Medical Research. Chapman & Hall; 1991.
Armitage P. Statistical Methods in Medical Research. 4th ed. Blackwell Science Ltd; 2002.

10. Language Used

All classes are conducted in English.

11. Important Course Requirements

Chief instructor's permission is required before registering to the course.
Also, students are required to have TOEFL iBT with a minimum score of 80 or IELTS with a minimumscore of 6.5.

12. Office Hours

Please contact Prof. Takahashi at kunihikot.dsc@tmd.ac.jp

13. Note(s) to Students

Online Q&A system is available during the course, and a realtime Q&A session (optional, June 8,2023, 14:00-, via zoom) is prepared.

This course uses the Stata statistical software. Stata is available for each student during the course. Students are expected to perform basic algebra, including logarithms and exponentials, by hand orusing calculator.

SISR620 (4813) Research Methodology in Biomedicine

(Code : 4813 1st ~2nd year 2units)

(Course ID: GS-c4813-L)

1. Instructors

NAME	DEPARTMENT	CONTACT INFORMATION
Associate Professor Dr. Cherdsak Iramaneerat, M.D. (**Chief Instructor**)	Department of Surgery, Division of General Surgery	Cherdsak.ira@mahidol.ac.th
Yodying Dangprapai, M.D.	Department of Physiology	Yodying.dan@mahidol.ac.th
Professor Dr. Varut Lohsiriwat, M.D.	Department of Surgery, Division of General Surgery	balloon@hotmail.com
Assistant Professor Thasaneeya Nopparatjamjomras, M.D.	Siriraj Health science education excellence center	Thasaneeya.rat@mahidol.ac.th
Wanchai Chinchalongporn, M.D.	Department of Surgery, Division of Vascular Surgery	chinchalongporn.w@gmail.com
Tharathorn Suwatthanarak, M.D.	Department of Surgery, Division of General Surgery	tharathorn.tha@mahidol.edu
Tanakorn Tarapongpun, M.D.	Department of Surgery, Division of Head-Neck and Breast Surgery	tanakorn.tar@mahidol.ac.th

2. Classroom/Lab Lecture Location

- Lecture (Meeting room of the Division of General surgery Syamindra bld, 12th fl.)
- Zoom cloud meeting 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

NO	Topic
1	Introduction, Philosophical foundations of research, research questions and hypotheses
2	Population and sample, Internal and external Validity
3	Experimental research
4	Descriptive research, Quality of life
5	Case-control study, Cohort study
6	Survival analysis
7	Research ethics, Research proposal
8	Survey research
9	Correlation research
10	Basic science research
11	Quantitative data analysis
12	Qualitative research
13	Data collection techniques in qualitative research
14	Qualitative data analysis
15	Student presentation

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**.**

Book4: 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

Book1: 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	DEPARTMENT	CONTACT INFORMATION
Assistant Professor Chutwichai Tovikkai, M.D. (**Chief Instructor**)	Department of Surgery, Division of General Surgery	Chutwichai.tov@mahidol.ac.th
Professor Dr. Varut Lohsiriwat, M.D.	Department of Surgery, Division of General Surgery	balloon@hotmail.com
Associate Professor Dr. Cherdsak Iramaneerat, M.D.	Department of Surgery, Division of General Surgery	Cherdsak.ira@mahidol.ac.th
Clinical Professor Asada Methasate,M.D.	Department of Surgery, Division of General Surgery	Asada.met@mahidol.ac.th
Assistant Professor Chulaluk Komoltri	Research Department	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
- Online learning: Synchronous learning via Zoom, Asynchronous learning via SelecX

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. Students will learn about how to enter and clean data (via database, spreadsheet and statistical software programs), principle of hypothesis testing, descriptive statistics, how to perform and interpret essential statistical tests (using commonly used statistical software programs) and how to calculate sample size.

5. Format

Lecture and computer labs.

6. Course Details

NO	Topic
1	Introduction to biostatistics, Introduction to statistical programs
2	Data type and data management
3	Descriptive statistics
4	Statistical hypothesis tests, t-test, ANOVA
5	Non-parametric test
6	Linear regression & correlation
7	Binary logistic regression
8	Survival analysis & Cox regression
9	Sample size calculation
10	Creating graphs and tables
11	Special consideration: missing data, propensity score matching
12	Introduction to biostatistics, Introduction to statistical programs
13	Data type and data management
14	Descriptive statistics
15	Statistical hypothesis tests, t-test, ANOVA

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

1. Altman DG. Practical statistic for medical research. Chapman & Hall. London. 1991.

2. White SE. Basic & Clinical Biostatistics. Lange. 5th ed. McGraw-Hill Education. 2020.

3. Hand SJ. Statistics: A Very Short Introduction. Oxford University Press. Oxford. 2008.

10. Language used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: Chutwichai Tovikkai, Department of General 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
MORI Takehiko	Chief Instructor / Professor	Department of Hematology	mori.hema@tmd.ac.jp
OHASHI Kenichi	Professor	Department of Human Pathology	kohashi.pth1@tmd.ac.jp
AKITA Keiichi	Professor	Department of Clinical Anatomy	akita.fana@tmd.ac.jp
WATABE Tetsuro	Professor	Department of Biochemistry	t-watabe.bch@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
KURATA Morito	Associate Professor	Comprehensive Pathology	kurata.pth2@tmd.ac.jp
AKIYAMA Yoshimitsu	Junior Associate Professor	Department of Molecular Oncology	yakiyama.monc@tmd.ac.jp
YAMAMOTO Kohei	Junior Associate Professor	Department of Comprehensive Pathology	yamamoto.pth2@tmd.ac.jp
SHIMADA Shu	Assistant Professor	Department of Molecular Oncology	shimada.monc@tmd.ac.jp

2. Classroom/Lab Lecture Location

On-demand: on WebClass. The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

・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.

・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 the functions of oncogenes and tumor suppressor genes and their abnormalities in cancer development.

・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 of the characteristics of cancer cells based on their differences from normal cells, including cell morphology and material and energy metabolism.
・To understand of metastasis, the most serious form of cancer, based on a basic knowledge of cell adhesion and polarity.
・To acquire basic knowledge of hereditary and arcuate pediatric cancers, which have different treatment and prognosis, compared to cancers of the elderly, and to understand their biological characteristics.
・To understand cell death/life span, cell proliferation/cycle, and DNA damage repair, all of which are directly linked to cell fate, with particular emphasis on their relationship to cancer.
・To understand established and new theory regarding cell transformation as well as cancer stem cells and relevant ES/iPS cells.

[Outline]
・The types and functional roles of oncogenes and tumor suppressor genes, which are important for understanding the molecular mechanisms of carcinogenesis, are described. In addition, the abnormalities of these genes in human cancers and detection methods of these genes in human cancers, and their relationship with carcinogens, differentiation, and angiogenesis are explained. The significance of angiogenesis in cancer growth and malignant transformation and the usefulness of differentiation-inducing therapy are also explained. and the usefulness of differentiation-inducing therapies. In particular, the history of research on the cancer-suppressor gene p53 from its discovery to the present is explained to learn the characteristics of cancer cells, and our latest findings are introduced.
・Cells, the basic unit of life, is explained with emphasis on the differences between normal cells and cancer cells. The latest findings on cell fate (proliferation, differentiation, cell death, transformation, and genetic traits), are also described, including the cell cycle, DNA damage response, and repair.
・Using actual cases of pathological diagnosis in medicine, how benign and malignant cancer, invasion, and metastasis are observed and diagnosed are explained. The degree of malignancy of cancer varies, and the treatment plan differs depending on the degree of malignancy. How this information is utilized in clinical practice from the standpoint of pathology is explained.
・In Japan, early diagnosis of cancer has been progressing, and there are more opportunities for diagnosis and treatment of early-stage cancer than in other countries. The diagnosis and treatment of early-stage cancer by showing actual cases are explained.
・How cancer lesions are changed by chemotherapy and radiotherapy, and how the appearance of cancer in each organ differs are explained from the point of view of the differences in its origin. In addition, from an anatomical point of view, the anatomy of the vascular system, which is necessary for understanding cancer treatment and cancer metastasis, are explained .

4. Course Objectives

To understand cancer's behavior and true condition from the biological and morphological viewpoint with relevance to diagnosis and treatment.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Anatomy for diagnosis and treatment of cancer -Thorax and abdominal organs and related structures
2	Oncogenes and tumor suppressor genes
3	Role of Pathology in Cancer Chemotherapy
4	Development of multifaceted therapies targeting the cancer microenvironment
5	Cancer atypia and malignancy
6	Cancer Cell Diversity and Pathological Diagnosis
7	Hereditary cancer
8	Discovery of Novel Genetic Abnormalities in Brain Tumors and Elucidation of Their Pathogenesis

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

To review basic anatomy and histology.

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: OKADA Takuya, Gastrointestinal Surgery

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

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Closely related not only to the carcinogenic process but also to the latest cancer treatments.

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
MORI Takehiko	Chief Instructor / Professor	Department of Hematology	mori.hema@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
ISHIBASHI Hironori	Junior Associate Professor	Department of Thoracic Surgery	hishiba.thsr@tmd.ac.jp
NAKAMURA Yuki	Assistant Professor	Department of Urology	nakamura.uro@tmd.ac.jp
HANAOKA Marie	Assistant Professor	Department of Gastrointestinal Surgery	hana.srg1@tmd.ac.jp
ISHIKAWA Yoshiya	Assistant Professor	Department of Hepatobiliary and Pancreatic Surgery	y-ishikawa.msrg@tmd.ac.jp

2. Classroom/Lab Lecture Location

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]

- Understand minimally invasive treatments for cancers in each area.
- 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 a video.

4. Course Objectives

Learn about the practice of minimally invasive surgery for cancer and understand its role in cancer diagnosis.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

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

7. Assessment

The assessment will be by the report assignments.

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: OKADA Takuya, Gastrointestinal Surgery
E-mail: t-okada.srg1@tmd.ac.jp
Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

Related to organ-specific cancers, etc.

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
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@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

2. Classroom/Lab Lecture Location

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]
- Understand minimally invasive treatments for cancers in each area.
- Understand the types, indications, and efficacy of radiation therapy.

[Outline]
Radiation therapy will be explained by treatment method. In particular, lectures on IMRT, high-precision radiotherapy of stereotactic irradiation and others, particle therapy using proton beams, and radiation therapy in multidisciplinary treatment will be provided by leading Japanese lecturers at the forefront of the field.

4. Course Objectives

- Understand minimally invasive treatments for cancer in each area.
- Understand the types, indications, and efficacy of radiation therapy.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Stereotactic radiotherapy (1)
2	Stereotactic radiotherapy (2)
3	Proton therapy (1)
4	Proton therapy (2)
5	Radiation therapy in multidisciplinary treatment (1)
6	Radiation therapy in multidisciplinary treatment (2)
7	Radiotherapy at Hirosaki University
8	/Radiotherapy at Hirosaki University

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

To read through the reference materials.

9. Reference Materials

Perez & Brady's principles and practice of radiation oncology／[edited by] Edward C. Halperin, David E. Wazer, Carlos A. Perez, Luther W.
Brady,Halperin, Edward C.,Wazer, David E,Perez, Carlos A.,Brady, Luther W., : Wolters Kluwer, 2019

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

Related to organ-specific cancers and others.

Organ-specialized Cancer

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

1. Instructors

Name	Position	Department	Contact Information
MORI Takehiko	Chief Instructor / Professor	Department of Hematology	mori.hema@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
FUJIWARA Hisashi	Junior Associate Professor	Department of Gastrointestinal Surgery	hfujiwara.srg1@tmd.ac.jp
ISHIKAWA Yoshiya	Assistant Professor	Department of Hepatobiliary and Pancreatic Surgery	y-ishikawa.msrg@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

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]
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, chemotherapy, and multidisciplinary treatment as a combination of both will be explained, alongside the indication, target, and benefit of such treatments. In addition, recent clinical studies and topics will also be covered.

4. Course Objectives

Learn the actual practice of organ-specialized cancer treatment and apply it to actual clinical practice and research.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Hepatobiliary and Pancreatic Cancer
2	Hematopoietic tumor - Hematopoietic Stem Cells Transplantation
3	Breast cancer
4	Urology cancer
5	Gynecologic cancer (uterine, ovarian)
6	Lung cancer
7	Gastric cancer
8	Esophageal cancer

7. Assessment

The assessment will be by the report assignments.

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: OKADA Takuya, Gastrointestinal Surgery
E-mail: t-okada.srg1@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”, “Advanced Clinical Oncology”, and “Cancer Genomics and Precision Medicine”.

Pediatric and Rare Cancers

(Code: 4824, 1st – 2nd year, 1 unit)
(Course ID: GS-c4824-L)

1. Instructors

Name	Position	Department	Contact Information
TAKAGI Masatoshi	Chief Instructor / Professor	Department of Pediatrics and Developmental Biology	m.takagi.ped@tmd.ac.jp
ASAKAGE Takahiro	Professor	Department of Head and Neck Surgery	tasakage.hns@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
MICHI Yasuyuki	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	Junior Associate Professor	Hospital Department of Neurosurgery	tamura.nsrg@tmd.ac.jp

2. Classroom/Lab Lecture Location

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]
Organize a systematic knowledge of the basic, clinical history, and current status of pediatric and rare cancers.
[Outline]
Classes will include an overview of pediatric and rare cancers from various angles.

4. Course Objectives

Learn the actual practice of pediatric and rare cancer treatment and apply it to actual clinical practice and research.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Rare cancer and Intractable cancer
2	Brain tumors
3	Bone and Soft Tissue Tumors
4	Pediatric cancer
5	Clinical lecture on head and neck cancer
6	Colorectal cancer
7	Oral cancer
8	Skin malignancies

7. Assessment

The assessment will be by the report assignments.

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: OKADA Takuya, Gastrointestinal Surgery
E-mail: t-okada.srg1@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”, “Advanced Clinical Oncology”, and “Cancer genomics and precision medicine”.

Advanced Clinical Oncology

(Code: 4825, 1st – 2nd year, 1 unit)
(Course ID: GS-c4825-L)

1. Instructors

Name	Position	Department	Contact Information
MORI Takehiko	Chief Instructor / Professor	Department of Hematology	mori.hema@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@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

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

【Course Purpose】

Systematically understand oncology in general. Organize the knowledge of oncology with a comprehensive approach, including basic research, epidemiology, therapeutics, palliative medicine, and social medicine aspects.

【Outline】

Classes will trace the oncology history and include an overview of oncology from various angles.

4. Course Objectives

Learn the overview of clinical oncology and apply it to actual clinical practice and research.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Advances in Cancer Drug Therapy
2	Cancer Rehabilitation
3	Diagnosis, treatment in bone metastasis
4	CAR-T Therapy
5	Reproductive function and conservation
6	Oncology Cardiology
7	Introduction to Palliative Oncology
8	Cancer in the Elderly

7. Assessment

The assessment will be by the report assignments.

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: OKADA Takuya, Gastrointestinal Surgery
E-mail: t-okada.srg1@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 “Cancer genomics and precision medicine”, “Organ-specialized Cancer”, and “Pediatric and Rare Cancers.”

Cancer Genomics and Precision Medicine

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

1. Instructors

Name	Position	Department	Contact Information
IKEDA Sadakatsu	Professor	Hospital Department of Cancer Center	ikeda.canc@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp

2. Classroom/Lab Lecture Location

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]
Organize a systematic knowledge of the basic to clinical aspects of cancer genomics.
[Outline]
The course will cover the fundamentals necessary to understand cancer genomic medicine, cancer gene panel testing as applied in clinical practice, and the signaling pathways and molecular targeted drugs necessary to interpret genetic mutations.

4. Course Objectives

Learn the actual practice of cancer genome diagnostics and apply it to actual clinical practice and research.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Basics of Genetic and genome variant
2	Basics of next generation sequencers
3	Data Analysis in cancer genomic profiling tests (1)
4	Data Analysis in cancer genomic profiling tests (2)
5	Current Status and Outlook of cancer genomic medicine (1)
6	Current Status and Outlook of cancer genomic medicine (2)
7	Treatment option after cancer genomic profiling tests (1)
8	Treatment option after cancer genomic profiling tests (2)

7. **Assessment**
   The assessment will be by the report assignments.

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: IKEDA Sadakatsu, Hospital Department of Cancer Center
    E-mail: ikeda.canc@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 “Advanced Clinical Oncology.”

Palliative Medicine: Outline

(Code: 4827, 1st – 2nd year, 1 unit)
(Course ID: GS-c4827-L)

1. Instructors

Name	Position	Department	Contact Information
MORI Takehiko	Chief Instructor / Professor	Department of Hematology	mori.hema@tmd.ac.jp
OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp

2. Classroom/Lab Lecture Location

On-demand: on WebClass.
The report assignments will be informed by e-mail.

3. Course Purpose and Outline

[Course Purpose]
Palliative medicine in Japan initially focused on pain relief for cancer patients who no longer responded to medical treatment to be cured. Later, the indication was expanded to include early stages of treatment as well.
The course will provide an overview of the overall picture as preparation for deepening understanding of the lectures that will be given in the future, which will take a multifaceted approach. The course also aims to provide students with knowledge of quality of life (QOL) to evaluate the patient as a whole and communication skills in dealing with such 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

Learn the actual practice of palliative medicine and apply it to actual clinical practice and research.

5. Format

The subject consists of lectures and report assignments.
All programs are conducted in an omnibus format.

6. Course Details

No.	Topics
1	Introduction to palliative medicine
2	Approach to physical symptoms in home healthcare
3	Respiratory symptom management and end-of-life care for cancer patients
4	Specialized Palliative Medicine in Practice in palliative care unit
5	Understanding and Responding to the Distress of Cancer Patients' Families and bereaved family
6	Responding to delirium
7	Psychiatric Issues at the End of Life
8	Overview of psycho-oncology

7. Assessment

The assessment will be by the report assignments.

8. Prerequisite Reading

None.

9. Reference Materials

Oxford Textbook Of Palliative Medicine 5th edition (Cherny and Fallon, Oxford Textbook of Palliative Medicine): 2015

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: OKADA Takuya, Gastrointestinal Surgery
E-mail: t-okada.srg1@tmd.ac.jp

Please contact the instructor regarding questions or consultations.

12. Note(s) to Students

The goal is to acquire knowledge that can be immediately put into practice.

SISR S 601 (4828) Applied Cancer Biology and Immunology

(Code: 4828, 1st~2nd year, 1 unit)
(Course ID: GS-c4828-L)

1. Instructors

NAME	DEPARTMENT	CONTACT INFORMATION
Chief instructor Assistant Professor Pradit Rushatamukayanunt, M.D.,Ph.D.	Department of Surgery, Division of Head Neck and Breast Surgery	Pradit.rus@mahidol.ac.th
Associate Professor Suebwong Chuthapisith, M.D.,Ph.D.	Department of Surgery, Division of Head Neck and Breast 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	Topic/Details
1	Introduction to Cancer Immunology
2	Cancer genetics and epigenetics
3	Cellular Signaling and Carcinogenesis
4	Cancer Phenotypes toward precision cancer therapy
5	Cancer Immunotherapy

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: Asst. Prof. Pradit Rushatamukayanunt, M.D., Ph.D., 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	DEPARTMENT	CONTACT INFORMATION
Associate Professor Nuttawut Sermsathanasawadi, M.D., Ph.D. (Chief Instructor)	Department of Surgery, Division of Vascular Surgery	Nuttawut.ser@mahidol.ac.th
Lecturer Visnu Lohsiriwat, M.D.	Department of Surgery, Division of Head-Neck and Breast Surgery	Visnu.loh@mahidol.ac.th
Tanakorn Tarapongpun, M.D.	Department of Surgery, Division of Head-Neck and Breast Surgery	tanakorn.tar@mahidol.ac.th
Assistant Professor Methichit Wattanapanitch	Division of Research Faculty of Medicine	Methichit.wat@mahidol.ac.th
Lecturer Patimaporn Wongprompitak, Ph.D.	Division of Research Faculty of Medicine	Patimaporn.won@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

NO	Topic
1	Lecture Stem Cell for Vascular Surgery
2	Clinical Application of ADSCs in Breast Reconstructive Surgery
3	Mesenchymal stem cell from the route of OB-GYN
4	Induced pluripotent stem cells: Applications in Biomedical Research
5	Limbal stem cell niche

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	DEPARTMENT	CONTACT INFORMATION
Lecture Doonyapat Sa-Nguanraksa,M.D., Ph.D. (**Chief instructor**)	Department of Surgery, Division of Head Neck and Breast Surgery	Doonyapat.san@mahidol.ac.th
Assistant Professor Pradit Rushatamukayanunt, M.D.,Ph.D.	Department of Surgery, Division of Head Neck and Breast Surgery	Pradit.rus@mahidol.ac.th
Assistant Professor Waraporn Imruetaicharoenchoke M.D.,Ph.D.	Department of Surgery, Division of Head Neck and Breast 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
1.	Basic Laboratory Relevance to Surgery 1
2.	Basic Laboratory Relevance to Surgery 2
3.	Basic Laboratory Relevance to Surgery 3
4.	Basic Laboratory Relevance to Surgery 4
5.	Basic Laboratory Relevance to Surgery 5

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: Lecture Doonyapat Sa-Nguanraksa,M.D., Ph.D., 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	Associate Professor	Division of General Surgery, Department of Surgery	prawat.kos@mahidol.ac.th
Wethit Dumronggittigule	Associate 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 Limsrichamrern
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
Siros Jitpraphai	Lecturer	Division of Urology Surgery, Department of Surgery	Sirros.jit@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 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 (7^{th} (North) floor Chalermphrakiet Building, Siriraj Hospital):
   Monday – Friday 7.00-8.00
   Operating theater (OR, 5^{th} 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 11^{th}

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	Assistant Professor	GI Med unit, Department of Medicine	
Atthaphorn Trakarnsanga	Associate Professor	Division of General Surgery, Department of Surgery	atthaphornt@gmail.com

Thammawat Parakonthun	Associate Professor	Division of General Surgery, Department of Surgery	t.parakonthun@gmail.com
Voraboot Taweerutchana	Lecturer	Division of General Surgery, Department of Surgery	Voraboot.taw@mehidol.ac.th
Chainarong Phalanusitthepha	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	
Kawada Kenro	Junior Associate Professor	Esophageal Surgery, TMDU	kawada.srg1@tmd.ac.jp

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 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 (7^{th} floor 72yr building): Monday - Friday 7.00-8.00

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

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

Conference and group discussion: to be announced

NO	Date	Topic/Details	Instructors
1	TBD	Principle of laparoscopic and robotic surgery	Assoc. Prof. Dr. Vitoon Chinswangwatanakul
2	TBD	Basic principle of endoscopy and innovation	Prof. Thawatchai Akaraviput
3	TBD	Minimally invasive of hernia surgery	Assoc. Prof. Dr.Asada Methasate
4	TBD	History and principle of esophageal cancer treatment	Assist. Prof. Dr.Jirawat Swangsri
5	TBD	Early upper GI cancer detection	Dr. Kumagai Youichi
6	TBD	Role of AI in GI malignancy detection	Dr. Hirasawa Toshiaki
7	TBD	Principle of ESD for early cancer treatment	Dr. Kawada Kenro
8	TBD	Minimally invasive surgery for esophageal cancer	Dr. Yutaka Tokairin
9	TBD	Minimally invasive surgery for gastric cancer	Assist. Prof. Thammawat Parakonthun
10	TBD	Principle of EUS for subepithelial tumor detection	Assoc. Prof. Nonthalee Pausawasdi
		Midterm Examination	
11	TBD	Management of GI subepithelial tumor	Assoc. Prof. Prasit Mahawongkajit
12	TBD	Approach to small bowel lesion	Lecturer Julajak Limsrivilai
13	TBD	ERCP and innovation	Lecturer Manus Rujivarodom
14	TBD	Principle of bariatric endoscopy	Dr. Kotchakorn
15	TBD	Role of minimally invasive bariatric surgery	Assist. Prof. Voraboot Taweerutchana
16	TBD	Role of minimally invasive endocrine surgery	Lecturer Nicha Srisuvoranan
17	TBD	IEE for colon lesion detection	Dr. Uayporn Siriyuyuen
18	TBD	Minimally invasive for pelvic floor	Lecturer Siriluck Prapasrivorakul

19	TBD	Principle of laparoscopic treatment of colon cancer	Assoc. Prof. Auttaporn Trakarnsanga
20	TBD	Minimally invasive for Linear surgery	Assist Prof. Wethit Dumronggittigule
21	TBD	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 Parakonthun	Associate 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 Phalanusitthepha	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	Assistant Professor Dr.	Division of General Surgery, Department of Surgery	Chutwichai.tov@mahidol.ac.th
Thammawat Parakonthun	Associate Professor Dr.	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
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

NO	Date	Time	Topic/Details	Instructors
1	TBD	15.00-16.00	Introduction to perioperative care and enhanced recovery after surgery (ERAS)	Prof. Dr.Varut Lohsiriwat
	TBD	16.00-17.00	Perioperative care in colorectal surgery	Prof. Dr.Varut Lohsiriwat
	TBD	15.00-16.00	Perioperative care in emergency surgery	Prof. Dr.Varut Lohsiriwat
2	TBD	16.00-17.00	Prevention of surgical site infection	Prof. Dr.Varut Lohsiriwat
	TBD	16.00-17.00	Nutrition therapy in surgical patients	Prof. Dr.Varut Lohsiriwat
	TBD	15.00-16.00	Why are your surgical patients still in the hospital?	Prof. Dr.Varut Lohsiriwat
3	TBD	13.00-15.00	Preoperative optimization	Assoc. Prof. Mingkwan Wongyingsinn
	TBD	15.00-16.00	Patient selection for ambulatory surgery	Assoc. Prof. Mingkwan Wongyingsinn
	TBD	15.00-17.00	Multimodal analgesia	Assoc. Prof. Mingkwan Wongyingsinn
4	TBD	15.00-17.00	Perioperative care in liver surgery	Assoc. Prof. Dr.Chitwichai Tovikkai
5	TBD	15.00-17.00	Perioperative care in pancreatic surgery	Assoc. Prof. Dr.Chitwichai Tovikkai
6	TBD	15.00-16.00	Perioperative care in upper GI surgery	Assist.Prof. Thammawat Parakonthun
7	TBD	16.00-17.00	Perioperative care in morbid obesity	Assist.Prof. Voraboot Taweerutchana
8	TBD	15.00-16.00	Postoperative monitoring	Assist.Prof. Jatuporn Sirikun
9	TBD	16.00-17.00	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)

Gynecologic Cancer Therapy

(Code : 4836 1st – 2nd year, 1 unit)
(Course ID: GS-c4836-L)

1. Instructors

Name	Position	Department	Contact In Formation
Perapong Inthasorn, MD	Chief Instructor / Associate Professor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	perapong_i@hotmail.com
Somsin Petyim, MD, PhD	Associate Professor	Infertility Unit, Department of Obstetrics & Gynaecology	Somsin.pet@mahido;.ac.th
Surasawadee Ausavarat, MD, PhD	Assistant Professor	Department of Clinical Pathology	
Chutikarn Chaimayo, MD, PhD	Instructor	Department of Microbiology	chutikarn.cha@mahidol.ac.th
Mark Stephan Felix, PhD	Associate Professor	Faculty of Social Sciences and Humanities	mark.fel@mahidol.ac.th
Pittaya Dankulchai	Associate Professor	Department of Radiology	pittayawin@yahoo.com
Pattama Chaopotong, MD	AssociateProfessor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	chaopotong@gmail.com
Irene Ruengkhachorn, MD	AssociateProfessor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	irene.rue@mahidol.ac.th
Vuthinun Achariyapota, MD	Assistant Professor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	vuthinun.ach@mahidol.edu
Sompop Kuljarusnont, MD	Instructor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	sompop.kul@mahidol.edu
Nida Jareemit, MD	Assistant Professor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	nida.jareemit@gmail.com
Pornprom Ittiamornlert, MD	Instructor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	spooky_kwang@hotmail.com

2. Classroom/Lab Lecture
Lecture room, Gynecologic oncology division, Chudhathuj Building 1st floor

3. Course Purpose and Outline
-Understand the concept and key element of Gyn cancer treatment
-Describe the difference of Gyn cancer treatment in various situations
-Understand practice of individual and multidisciplinary treatment for Gyn cancer
-Describe the cell biology, translational pathology, immunology, gene therapy, nutrigenomics
-Describe the novel treatment modalities of Gyn cancer
-Deal with common problems in Gyn cancer treatment
-Able to initiate conceptual idea for biomolecular research in Gyn cancer

4. Course Objectives
By the end of the course, participants will be able to:
-Understand scientific principles which underlie cell biology, translational pathology, gene therapy, nutrigenomics of Gyn cancer
-Understand the clinical, ethical and regulatory aspects of the biomolecular of Gyn cancer
-Learn laboratory techniques that could be used in biomolecular of Gyn cancer research.
-Demonstrate a group working and responsibility for work assigned.
-Demonstrate effective communication skills for scientific presentation.

5. Format
Lectures, group discussion, report presentation
All class activities will be provided in an online Format via Moodle platform/on-site depends on instuctors

6. Course Details

No.	Topics (hours)	Instructors
1	Reproductive biology and LAB	Somsin Petyim
2	Cellular structure and function in Gynecologic cancer pathology	Somsin Petyim
3	Molecular mechanisms of HPV induced carcinogenesis	Chutikarn Chaimayo
4	Genetic and molecular basis of Gynecologic cancer development	Surasawadee Ausavarat
5	Tumor microenvironment in Gynecologic cancer	
6	Clinical applications of biomolecular research in Gynecologic cancer	
7	(Ethical consideration in Gynecologic cancer biomolecular research)	
8	(Regulatory frameworks for Gynecologic cancer biomolecular research)	
9	Laboratory techniques for biomolecular analysis of Gynecologic cancer	Surasawadee Ausavarat
10	Molecular profiling and subtyping of Gynecologic cancers	
11	Preclinical models for Gynecologic cancer research	
12	Translational research and clinical trials in Gynecologic cancer	
13	Manuscript writing and academic presentation	

Clinical		
1	Modern and precision cervical cancer screening +/- liquid biopsy	Pattama Chaopotong
2	Targeted and immunotherapy in Gyn cancer	
3	Precision medicine for ovarian cancer treatment	Vuthinun Achariyapota
4	Bioinformatics in Gyn cancer	Sompop Kuljarusnont
5	Biomolecular markers in endometrium carcinoma	Sompop Kuljarusnont
6	GTN: molecular markers and treatment	Nida Jareemit
7	MIS in Gyn cancer	Pornprom Ittiamornlert
8	Radiation for Gyn cancer	Pittaya Dankulchai

7. Assessment
Grades are determined based on lecture attendance and written and oral examination. Basic knowledge, 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: Irene Ruengkhachorn, Gynecologic Oncology Division, Department of Obstetrics & Gynaecology
E-mail: irene.rue@mahidol.ac.th
Please contact the instructor regarding questions or consultations.

12. Note(s) to Students
The student who wishes to continue his/her surgical career in Gyn cancer will have a chance to learn and understand Gyn cancer from basic knowledge to patient care.
This is an elective course to be taken during joint Ph.D. program providing by Mahidol University.
Ph.D. student focusing in Gyn cancer is encouraged to take this course.

Specialized Surgeries

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

1. Instructors

Name	Position	Department	Contact Information
KUDO Toshifumi	Associate Professor	Department of Specialized Surgeries	t-kudo.srg1@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: 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

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: KINUGASA Yusuke, Department of Gastrointestinal Surgery
E-mail: kinugasa.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
AKAHOSHI Keiichi	Junior Associate Professor	Department of Hepatobiliary and Pancreatic Surgery	akahoshi.msrg@tmd.ac.jp
Hiroaki Ono	Junior Associate Professor	Department of Hepatobiliary and Pancreatic Surgery	ono.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. Clinical practice is limited to the ranges allowed by Japanese law.

5. Format

Small-group guidance, with opportunities for debate.

6. Course Details

Through the observation of clinical practice, students will learn the latest diagnosis, operative procedures, and chemotherapy, focusing on hepatobiliary and pancreatic cancers. In addition, lectures will cover the latest findings on the biomolecular mechanisms of carcinogenesis, cancer growth, invasion, and metastasis.

HBP Clinical Conference: Every Monday, 16:30-18:00 PM
Journal Club: Every Wednesday, 7:50 – 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

Lectures are basically given in English. Clinical meetings, such as case conferences, are conducted in Japanese but are explained in English when appropriate.

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
YOSHIDA Soichiro	Associate Professor	Department of Urology	s-yoshida.uro@tmd.ac.jp
TANAKA Hajime	Junior Associate Professor	Department of Urology	hjtauro@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.

Gynecologic Oncology(TMDU)

（Code：4845, 1st – 2nd year: 4 units）

(Course ID: GS－c4845－S)

1. Instructors

Name	Position	Department	Contact Information
MIYASAKA Naoyuki	Chief Instructor / Professor	Department of Comprehensive Reproductive Medicine	n.miyasaka.gyne@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 gynecological diseases that are difficult to diagnose and treat. Necessary knowledge for research topics related to gynecologic oncology like the causes of gynecological tumors will also be studied.

4. Course Objectives

The objective of this course is to understand the structure of organs where gynecological tumors arise, the mechanisms responsible for the carcinogenesis and strategy for the treatment.

5. Format

Lectures are given in small groups by staff specialized in the area of gynecologic oncology.

6. Class Detail

The characteristics of various neoplastic lesions of the female reproductive organs, such as uterus, ovaries, fallopian tubes, and others, and the mechanisms of the tumor development will be explained. The up-to date method on the diagnosis and state-of-the-art technology on the treatment of various neoplastic lesions will also be discussed.

7. Assessment

Emphasis will be placed on active participation in lectures, questions, and suggestions.

8. Course Prerequisites

Basic knowledge of gynecologic oncology is recommended for participation.

9. Reference Materials

To be announced at the beginning of the academic year.

10. Language Used

All classes are conducted in English.

11. Office Hours

Mon – Fri: 9:00 AM – 17:00 PM

Contact: MIYASAKA Naoyuki, Department of Comprehensive Reproductive Medicine
E-mail: n.miyasaka.gyne@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.

SISR 610 (4845) Surgery for Upper GI Cancer

1. Instructors

NAME	DEPARTMENT	CONTACT INFORMATION
Chief Instructor Clinical Professor. Asada Methasate, M.D., Ph.D	Department Of Surgery, Division Of General Surgery	asada.met@mahidol.ac.th
Associate Professor Vitoon Chinswangwatanakul, M.D., Ph.D	Department Of Surgery, Division Of General Surgery	vitoon.chi@mahidol.ac.th
Professor Thawatchai Akaraviput, M.D.	Department Of Surgery, Division Of General Surgery	thawatchai.aka@mahidol.ac.th
Assistant Professor Jirawat Swangsri,M.D., Ph.D.	Department Of Surgery, Division Of General Surgery	jirawat.swa@mahidol.ac.th
Associate Professor Thammawat Parakonthun,M.D.	Department Of Surgery, Division Of General Surgery	thammawat.pha@mahidol.ac.th
Assistant Professor Chainarong Phalanusitthepha,M.D.	Department Of Surgery, Division Of General Surgery	chainarong.pha@mahidol.ac.th
Assistant Professor Voraboot Taweerutchana,M.D.	Department Of Surgery, Division Of General 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.	Topic/Details
1	Upper GI Cancer Operation (1)
2	Upper GI Cancer Operation (2)
3	Upper GI Endoscopy (1)
4	General Surgery Outpatient Clinic (1)
5	Upper GI Cancer Operation (3)
6	Upper GI Cancer Operation (4)
7	Upper GI Cancer Operation (5)
8	Upper GI Endoscopy (2)
9	General Surgery Outpatient Clinic (2)
10	Upper GI Cancer Operation (6)
11	Upper GI Cancer Operation (7)
12	Upper GI Cancer Operation (8)
13	Upper GI Endoscopy (3)
14	General Surgery Outpatient Clinic (3)
15	Upper GI Cancer Operation (9)
16	Upper GI Cancer Operation (10)
17	Upper GI Endoscopy (4)
18	General Surgery Outpatient Clinic (4)
19	Upper GI Cancer Operation (11)
20	Upper GI Cancer Operation (12)
21	Upper GI Endoscopy (5)
22	Upper GI Conference (1)
23	General Surgery Outpatient Clinic (5)

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

Monday – Friday, 9:00 – 17:00

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.

12. 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
Atthaphorn Trakarnsanga	Associate professor	Division of General Surgery, Department of Surgery	Atthaphorn.tra@mahidol.ac.th
Thammawat Parakonthun	Associate professor Dr.	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 Parakonthun
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 Instrctor/ Associate Professor Dr.	Division of General Surgery, Department of Surgery	yongyut.sir@mahidol.ac.th
Prawej Mahawithitwong	Associate Professor	Division of General Surgery, Department of Surgery	Prawej.mah@mahidol.ac.th
Prawat Kositamongkol	Associate Professor	Division of General Surgery, Department of Surgery	prawat.kos@mahidol.ac.th
Chutwichai Tovikkai	Assistant Professor	Division of General Surgery, Department of Surgery	chutwichai.tov@mahidol.ac.th
Wethit Dumronggittigule	Associate 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 (7^{th} floor 72yr building): Monday - Friday 7.00-8.00
Operating theater (OR, 5^{th} floor Syamindra building): Monday – Thursday 9.00-16.00
Grand round (12^{th} 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 wishes 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 Instrctor/ Associate Professor	Division of Vascular Surgery, Department of Surgery	Chumpol.won@mahidol.ac.th
Chanean Ruangsetakit	Professor	Division of Vascular Surgery, Department of Surgery	Cheanean.rua@mahidol.ac.th
Khamin Chinsakchai	Associate Professor	Division of Vascular Surgery, Department of Surgery	Khamin.chi@mahidol.ac.th
Nuttawut Sermsathanasawadi	Associate Professor	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th
Nattawut Puangpunngam	Lecturer	Division of Vascular Surgery, Department of Surgery	Nattawut.pua@mahidol.ac.th

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
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular Ultrasonography 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Vascular outpatient clinic 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 3	Assoc. Prof. Chumpol Wongwanit,M.D.

			and All Instructors
TBD	9.00 - 16.00	Vascular operation 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular Ultrasonography 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Ulcer clinic 1	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular Ultrasonography 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

TBD	9.00 - 12.00	Ulcer clinic 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 2	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Vascular Ultrasonography 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular Ultrasonography 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Ulcer clinic 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 6	Assoc. Prof. Chumpol Wongwanit,M.D.

			and All Instructors
TBD	9.00-12.00	Vascular outpatient clinic 8	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 4	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Vascular Ultrasonography 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular outpatient clinic 9	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 5	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 12.00	Vascular Ultrasonography 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Vascular outpatient clinic 10	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 6	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors

TBD	9.00 - 12.00	Vascular Ultrasonography 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Ulcer clinic 3	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	13.00 - 16.00	Chronic limb threatening ischemia clinic 7	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00-12.00	Vascular outpatient clinic 11	Assoc. Prof. Chumpol Wongwanit,M.D. and All Instructors
TBD	9.00 - 16.00	Vascular operation 7	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 Beast, Department of Surgery	suebwong.chu@mahidol.ac.th
Pongthep Pisarnthurakit	Lecturer	Division of Head Neck and Beast, Department of Surgery	Pongthep.pis@mahidol.ac.th
Waraporn Imruetaicharoenchoke	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Waraporn Imr@mahidol.ac.th
Pradit Rushatamukayanunt	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Pradit.rus@mahidol.ac.th
Mongkhol Boonsripithayanont	Lecturer	Division of Head Neck and Beast, Department of Surgery	Mongkhol.boo@mahidol.ac.th
Visnu Lohsiriwat	Associate Professor	Division of Head Neck and Beast, Department of Surgery	Visnu.loh@mahidol.ac.th
Doonyapat Sanguanraksa	Lecturer Dr.	Division of Head Neck and Beast, Department of Surgery	Doonyapat.san@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.Suebwong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 2	Assoc.Prof.Dr.Suebwong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 3	Assoc.Prof.Dr.Suebwong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 4	Assoc.Prof.Dr.Suebwong Chuthapisith and All Staff
8.00 – 9.00	Evidence-based in Head neck and Breast surgery conference 5	Assoc.Prof.Dr.Suebwong Chuthapisith and All Staff
8.00 – 9.00	Perioperative care in Head neck and Breast surgery conference 1	Assoc.Prof.Dr.Suebwong Chuthapisith and All Staff

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

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 Chalermphrakiet 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.

Gynecologic Oncology(MU)

(Code：4852 1st – 2nd year, 4units)
(Course ID: GS-c4852-L)

1. Instructors

Name	Position	Department	Contact In Formation
Perapong Inthasorn	Chief Instructor / AssociateProfessor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	perapong_i@hotmail.com
Pattama Chaopotong	AssociateProfessor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	chaopotong@gmail.com
Irene Ruengkhachorn	AssociateProfessor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	irene.rue@mahidol.ac.th
Vuthinun Achariyapota	Assistant Professor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	vuthinun.ach@mahidol.edu
Sompop Kuljarusnont	Instructor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	sompop.kul@mahidol.edu
Nida Jareemit	Assistant Professor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	nida.jareemit@gmail.com
Pornprom Ittiamornlert	Instructor	Gynecologic Oncology Division, Department of Obstetrics & Gynaecology	spooky_kwang@hotmail.com

2. Classroom/Lab Lecture
Lecture room, Gynecologic oncology division, Chudhathuj Building 1st floor
Operating theater, 100th Year Somdech PhraSrinagarindra Building 5th floor

3. Course Purpose and Outline
To understand a management of Gyn cancer in surgical viewpoint from preoperative period to postoperative period according to ERAS protocol.
To describe how to prevent and treatment of Gyn cancer surgery related complications
Various aspects of surgical management in Gyn cancer including indications, using and toxicity management for chemotherapy treatment and posttreatment surveillance
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 :
-Describe pathogenesis of common Gyn cancer
-Describe essential pre-operative investigation and proper surgical treatment approach in patients with of Gyn cancer
- Describe advantages and disadvantages of each surgical technique used in the treatment of Gyn cancer
-Describe the surgery and techniques used in the treatment of Gyn cancer
-Describe the pre and post operative care of the patients with Gyn cancer

5. Format

Lecture, seminars and conferences: To delve deeper insight into the problems through discussions with supervisors, make a paper through a small group discussion and cases presentations at a large number conference.
Clinical Practice: Ward round of Gyn cancer patient during pre-operative to post-operative period the patient's disease, and Gyn cancer surgery participation in in Siriraj Hospital.

6. Course Details

Lecture and conference :

No.	Date	Class Content	Instructor
1.	9:00-12:00	How to approach Gyn cancer surgery	Perapong Inthasorn
2.	9:00-12:00	Pre and post operative care of Gyn cancer	Irene Ruengkhachorn
3.	9:00-12:00	Important complications of Gyn cancer : Surgery and Chemotherapy	Vuthinun Achariyapota
4.	9:00-12:00	Minimally invasive surgery for Gyn cancer	Pornprom Ittiamornlert, Nida Jareemit
5.	9:00-12:00	Fertility sparing surgery for Gyn cancer	Sompop Kuljarusnont

Practice :
To know the outline of the treatment through the case, to perform the acquisition oftechnology. 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- Friday 9.00-15.00 at Gyn operating room
Ward round : every day except Tuesday 7.00-8.00
Grand round : every Tuesday 8.00-9.00

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: Irene Ruengkhachorn, Gynecologic Oncology Division, Department of Obstetrics & Gynaecology
E-mail: irene.rue@mahidol.ac.th
Please contact the instructor regarding questions or consultations.

12. Note(s) to Students
The student who wishes to continue his surgical career in Gyn cancer will have a chance to learn and understand Gyn cancer from basic knowledge to patient care.
This is an elective course to be taken during joint Ph.D. program providing by Mahidol University.
Ph.D. student focusing in Gyn cancer is encouraged to take this course

Activities	**6 months duration (24 wks)**
Onco Clinic 2 hr/week	48 hr
OR Gyn Onco ทำเอง สหสาขา : 3 hours/case	1case/week = 72 hr
MIS or HIPEC in Gyn Onco surgery เข้าช่วย 1 ราย (4 hr)/mo	24 hr
Grand round on Tuesday 8:00-9:00	24 hr
Chemotherapy round 7:00-8:00 จ อ พ	72 hr

Propose PA as Clinical Educator and PhD student

	7:00-8:00	8.00-9.00	9.00-12.00	13.00-16.00
Monday	Chemotherapy round (Gyn onco 4 Units)	Grand Round General Gyn (Clin Core I)	OR Gyn Onco (Gyn onco 4 Units)	OR Gyn Onco (Gyn onco 4 Units)
Tuesday	Chemotherapy round (Gyn onco 4 Units)	Grand Round Gyn Onco (Gyn onco 4 Units)	Gyn Onco clinic (Gyn onco 4 Units)	Colposcopy (Clin Core II)
Wednesday	Chemotherapy round (Gyn onco 4 Units)	Conference general (Clin Core I)	OR General (Clin Core I)	OR Gyn Onco-Fellows (Clin Core II)
Thursday		Conference Gyn Onco (Clin Core II)	OPD gyn (Clin Core I)	
Friday		Conference general (Clin Core I)	MIS or HIPEC in Gyn Onco surgery (Gyn onco 4 Units)	TC ทุก ๆ 10 สัปดาห์ (Clin Core II)

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

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	Associate Professor	Department of Clinical Anatomy	harada.fana@tmd.ac.jp
MUROU Satoru	Junior Associate 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
OKAMOTO Yoshimi	Assistant Professor	Department of Developmental and Regenerative Biology	okamoto.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
ONOGI Shinya	Associate Professor	Department of Biomedical Information	onogi.bmi@tmd.ac.jp
ZHOU Dongbo	Assistant Professor	Department of Biomedical Information	zhou.bmi@tmd.ac.jp
SUGINO Takaaki	Assistant Professor	Department of Biomedical Information	sugino.bmi@tmd.ac.jp

2. Classroom/Lab Lecture Location

Department of Bioinformation, Institute of Biomaterials and Bioengineering 4F

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 mechanical and informational points of view. The course will cover the basics of robotics, control engineering and statistical analysis of human body. 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 surgeries.

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
HAMAMOTO Yasuo	Chief Instructor / Professor	Medical Oncology	hamamoto.yasuo@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: HAMAMOTO Yasuo, Medical Oncology,
E-mail: hamamoto.yasuo@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 princiciples 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	TBD	09.00-12.00	What is systems approach + MATLAB tutorial	Somponnat
2	TBD	09.00-12.00	Mathematical representation of biological systems	Somponnat
3	TBD	09.00-12.00	Rate law and basic biomolecular dynamics	Somponnat
Module II: Mechanistic approach				
4	TBD	09.00-12.00	Mechaelis Menten kinetics, avidity and cooperativity	Somponnat
5	TBD	09.00-12.00	Solving dynamic models: ode solvers	Somponnat
6	TBD	09.00-12.00	Stability and noise in biology	Somponnat
7	TBD	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	TBD	09.00-12.00	Graph Theory basics	Metha
9	TBD	09.00-12.00	Surveying complex biological systems	Siwanon
10	TBD	09.00–12.00	Important databases and basics of data mining	Sira(CU)
11	TBD	09.00-12.00	Building regression models	Metha

Module IV: Applications in Pharmacology				
12	TBD	09.00-12.00	PK/PD modeling	Dr.Paul
13	TBD	09.00-12.00	Cancer drug discovery	Siwanon
14	TBD	09.00-12.00	Precision Medicine	Manop
15	TBD	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%j

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	Department	Contact Information
Associate Professor Nuttawut Sermsathanasawadi, M.D., Ph.D. (**Chief Instrctor**)	Division of Vascular Surgery, Department of Surgery	Nuttawut.ser@mahidol.ac.th

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.
2. Describe various types of stem cells in the human body and their potential applications in regenerative medicine.
3. Understand the clinical, ethical and regulatory aspects of the 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.	Topic/Details
1	Introduction to Laboratory
2	Basic Lab Instruments and Equipments
3	Basic Lab Instruments and Equipments
4	Basic Lab Instruments and Equipments
5	Basic Lab Instruments and Equipments
6	Good Lab Practice
7	Blood Perfusion and Laser Doppler
8	Blood Perfusion and Laser Doppler
9	Basic Cell Culture
10	Basic Cell Culture
11	Basic Flow Cytometrty
12	Basic Flow Cytometrty
13	Hand on operation Flow Cytometer
14	QQMNC cultivation
15	Phenotypic and characterization of Cells
16	Apoptosis test by Flowcytometry
17	Colony forming assay
18	Tube formation
19	Insight of Confocal Microscopy
20	IPS Derived EPC
21	IPS Derived EPC
22	IPS Derived EPC
23	IPS Derived EPC
24	Lab Discussion
25	Lab Discussion
26	Lab Discussion

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**
   The papers and other materials to be covered in class will be announced in advance to those who register for the course, along with a schedule, so students are encouraged to prepare for the course.

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

No.	Name	Position	Department	Contact
1	AKITA Keiichi	Professor	Clinical Anatomy	akita.fana@tmd.ac.jp
2	ASAKAGE Takahiro	Professor	Head and Neck Surgery	tasakage.hns@tmd.ac.jp
3	MORI Hiroki	Professor	Plastic and Reconstructive Surgery	moriplas@tmd.ac.jp
4	TANAKA Kentaro	Professor	Reconstructive Plastic Surgery	kenta.plas@tmd.ac.jp
5	NAKAJIMA Yoshikazu	Professor	Biomedical Information	nakajima.bmi@tmd.ac.jp
6	KINUGASA Yusuke	Professor	Gastrointestinal Surgery	kinugasa.srg1@tmd.ac.jp
7	TAGA Tetsuya	Professor	Stem Cell Regulation	taga.scr@mri.tmd.ac.jp
8	TANAKA Shinji	Professor	Molecular Oncology	tanaka.monc@tmd.ac.jp
9	TANAKA Toshihiro	Professor	Human Genetics and Disease Diversity	ttana.brc@tmd.ac.jp
10	NAKAMURA Keiko	Professor	Global Health Entrepreneurship	nakamura.ith@tmd.ac.jp
11	NISHINA Hiroshi	Professor	Developmental and Regenerative Biology	nishina.dbio@mri.tmd.ac.jp
12	FUJII Yasuhisa	Professor	Urology	y-fujii.uro@tmd.ac.jp
13	FUJIWARA Takeo	Professor	Public Health	fujiwara.hlth@tmd.ac.jp
14	MIURA Masahiko	Professor	Oral Radiation Oncology	masa.mdth@tmd.ac.jp
15	OKAMOTO Ryuichi	Professor	Gastroenterology and Hepatology	rokamoto.gast@tmd.ac.jp
16	YOSHIDA Masayuki	Professor	Life Sciences and Bioethics	masa.vasc@tmd.ac.jp
17	TAKAHASHI Kunihiko	Professor	Biostatistics	kunihikot.dsc@tmd.ac.jp
18	MORI Takehiko	Professor	Hematology	mori.hema@tmd.ac.jp
19	MIYASAKA Naoyuki	Professor	Comprehensive Reproductive Medicine	n.miyasaka.gyne@tmd.ac.jp
20	YOSHII Toshitaka	Professor	Orthopaedic and Spinal Surgery	yoshii.orth@tmd.ac.jp
21	OHASHI Kenichi	Professor	Human Pathology	kohashi.pth1@tmd.ac.jp
22	WATABE Tetsuro	Professor	Biochemistry	t-watabe.bch@tmd.ac.jp
23	HARADA Hiroyuki	Professor	Oral and Maxillofacial Surgical Oncology	hiro-harada.osur@tmd.ac.jp
24	HAMAMOTO Yasuo	Professor	Medical Oncology	hamamoto.yasuo@tmd.ac.jp
25	IKEDA Sadakatsu	Professor	Clinical Oncology	ikeda.canc@tmd.ac.jp
26	KOCHI Yuta	Professor	Genomic Function and Diversity	y-kochi.gfd@mri.tmd.ac.jp
27	KUDO Toshifumi	Professor	Cardiovascular Surgery	t-kudo.srg1@tmd.ac.jp

28	TAKAGI Masatoshi	Professor	Pediatrics and Developmental Biology	m.takagi.ped@tmd.ac.jp
29	YOSHIDA Soichiro	Associate Professor	Urology	s-yoshida.uro@tmd.ac.jp
30	TOKUNAGA Masanori	Associate Professor	Gastrointestinal Surgery	tokunaga.srg1@tmd.ac.jp
31	MICHI Yasuyuki	Associate Professor	Oral and Maxillofacial Surgical Oncology	y-mic.mfs@tmd.ac.jp
32	NAMIKI Takeshi	Associate Professor	Dermatology	tnamderm@tmd.ac.jp
33	ISHIBASHI Hironori	Associate Professor	Thoracic Surgery	hishiba.thsr@tmd.ac.jp
34	MATSUYAMA Yusuke	Associate Professor	Global Health Promotion	matsuyama.hlth@tmd.ac.jp
35	ONOGI Shinya	Associate Professor	Biomedical Information	onogi.bmi@tmd.ac.jp
36	YOSHIKI Naoyuki	Associate Professor	Comprehensive Reproductive Medicine	n.yoshiki.crm@tmd.ac.jp
37	HIRAI Takashi	Associate Professor	Orthopaedic and Spinal Surgery	hirai.orth@tmd.ac.jp
38	OKAMOTO Kentaro	Associate Professor	Specialized Surgeries	okasrg2@tmd.ac.jp
39	KURATA Morito	Associate Professor	Comprehensive Pathology	kurata.pth2@tmd.ac.jp
40	HARADA Masayo	Associate Professor	Clinical Anatomy	harada.fana@tmd.ac.jp
41	NAWA Nobutoshi	Associate Professor	Public Health	nawa.ioe@tmd.ac.jp
42	TABU Kouichi	Junior Associate Professor	Stem Cell Regulation	k-tabu.scr@mri.tmd.ac.jp
43	ARIIZUMI Yosuke	Junior Associate Professor	Head and Neck Surgery	ariizumi.hns@tmd.ac.jp
44	OONO Kazuchika	Junior Associate Professor	Head and Neck Surgery	ohno.hns@tmd.ac.jp
45	YAMAMOTO Masahide	Junior Associate Professor	Hematology	hide.hema@tmd.ac.jp
46	ONO Hiroaki	Junior Associate Professor	Hepatobiliary and Pancreatic Surgery	ono.msrg@tmd.ac.jp
47	AKAHOSHI Keiichi	Junior Associate Professor	Hepatobiliary and Pancreatic Surgery	akahoshi.msrg@tmd.ac.jp
48	KOFUJI Satoshi	Junior Associate Professor	Developmental and Regenerative Biology	kofuji.dbio@mri.tmd.ac.jp
49	MORITA Ayako	Associate Professor (Career Track)	Public Health	morita.hlth@tmd.ac.jp

50	AKIYAMA Yoshimitsu	Junior Associate Professor	Molecular Oncology	yakiyama.monc@tmd.ac.jp
51	MUROU Satoru	Junior Associate Professor	Clinical Anatomy	muro.fana@tmd.ac.jp
52	FUJIWARA Hisashi	Junior Associate Professor	Gastrointestinal Surgery	hfujiwara.srg1@tmd.ac.jp
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54	YAMAMOTO Kohei	Junior Associate Professor	Comprehensive Pathology	yamamoto.pth2@tmd.ac.jp
55	TANAKA Hajime	Junior Associate Professor	Urology	hjtauro@tmd.ac.jp
56	ZHOU Dongbo	Assistant Professor	Biomedical Information	zhou.bmi@tmd.ac.jp
57	SUGINO Takaaki	Assistant Professor	Biomedical Information	sugino.bmi@tmd.ac.jp
58	OKAMOTO YOSHIMI	Assistant Professor	Developmental and Regenerative Biology	okamoto.dbio@mri.tmd.ac.jp
59	TAKAOKA Ayumi	Assistant Professor	Gastrointestinal Surgery	takaoka.srg1@tmd.ac.jp
60	HANAOKA Marie	Assistant Professor	Gastrointestinal Surgery	hana.srg1@tmd.ac.jp
61	SHIMADA Shu	Assistant Professor	Molecular Oncology	shimada.monc@tmd.ac.jp

concurrent post

1	NAKAMURA Yuki	Assistant Professor	Urology	nakamura.uro@tmd.ac.jp
2	OKADA Takuya	Associate Professor	Gastrointestinal Surgery	t-okada.srg1@tmd.ac.jp
3	KAWADA Kenro	Junior Associate Professor	Gastrointestinal Surgery	kawada.srg1@tmd.ac.jp
4	KUDO Atsushi	Associate Professor	Hepatobiliary and Pancreatic Surgery	kudomsrg@tmd.ac.jp

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

No.	Name	Position	Department	Contact
1	Vitoon Chinswangwatanakul	Associate Professor Dr.	Division of General Surgery, Department of Surgery	Vitoon.chi@mahidol.ac.th
2	Thawatchai Akaraviputh	Professor	Division of General Surgery, Department of Surgery	Thawatchai.aka@mahidol.ac.th
3	Manop Pithukpakorn	Professor		
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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