VINUNIVERSITY

# CURRICULUM FRAMEWORK

## RESIDENT PHYSICIAN DIPLOMA

## LEVEL-I SPECIALIST DIPLOMA

## General Surgery Residency Program

***PROGRAM CODE:*** **62720750**

***Applicable for Cohorts 1,2,3,4,5 from Academic Year 2025 - 2026***

*(Released along with Decision No. 525/2025/QĐ-VUNI dated August, 25 2025 by Provost of VinUniversity)*

## Records of changes

| Version | Published Date | Effective Date | Approved by | Description of change |
|---|---|---|---|---|
| 1.0 | 08/01/2020 | 08/01/2020 | Prepared by: Program Director<br>Approved by: Provost | First release |
| 2.0 | 12/08/2020 | 12/08/2020 | Prepared by: Program Director<br>Approved by: Provost | Updates version 2 |
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| 6.0 | 25/8/2025 | 25/8/2025 | Developed by Acting Program Director of General Surgery Residency Program<br>Approved by: Provost | Updates version 6 |

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# 1. PROGRAM OVERVIEW

## 2.1 Program Profile

| | |
|---|---|
| **Name of the degree** | Residency Diploma in General Surgery |
| **Name of the program** | General Surgery Residency Program |
| **Program Code[1]** | 62720750 |
| **Vietnam Qualifications Framework Level[2]** | 7 |
| **Length of Program** | 6 years |
| **Mode of Delivery** | Full-time |
| **Language of Delivery** | English |
| **Total credits** | 378 credits |
| **Home College** | College of Health Sciences |

## 2.2 Program Purpose

The General Surgery Residency Program at VinUniversity – College of Health Sciences (CHS) complies with the regulations and requirements of the Vietnamese government. Specifically, the program design is guided by the Ministry of Health (MOH) Framework (Endorsed in 2006 by MOH, Decision: 19/2006/QĐ-BYT). Moreover, the training program is designed to international standards so that residents who complete the training at CHS are able to deliver high quality services nationally and internationally. The concept -- graded and progressive responsibility which is embedded in any residency training program in the United States (US) -- is a core tenet of residency training at CHS. Supervision in the setting of graduate medical education has the goals of assuring the provision of safe and effective care to patients during training; developing each resident's skills, knowledge and attitudes to create independent practitioners, and establishing a foundation for continued individual professional growth. The training program has been evaluated against international professional standards for residents outside of the US (ACGME-I), so that residents are equivalent to those accepted by the international health care sector. The training programs at CHS are dedicated to residents' learning and the achievement of competencies by:

- Being a competency-, pedagogy- and evidence-based program[3];

[1] Program Code is identified in the program license and it must be aligned with the Circular No. 09 (2022) on the statistical classification of academic disciplines in higher education.

[2] The Vietnamese Qualifications Framework (VQF) referred to as Appendix III.1, established in 2016, serves as a structured system for organizing and categorizing qualifications across various levels of education and training in Vietnam. This framework aims to standardize the capacity, academic requirements, and qualifications necessary for specific levels within vocational education and higher education in the country. The VQF consists of 8 qualification levels: Level 1 - Primary I; Level 2 - Primary II, Level 3 - Primary III, Level 4 - Intermediate; Level 5 – College/ Advance Diploma; Level 6 - Bachelor; Level 7 - Master; Level 8 - PhD.

[3] Deborah J. DeWaay et al, Am J Med Sci 2016, Redesigning Medical Education in Internal Medicine: Adapting to the Changing Landscape of 21st Century Medical Practice

- Training residents to be not only an expert in their field, but also an effective member of interprofessional teams that are responsive to the needs of patients, their families and communities, and the overall health system;
- Providing broad based inpatient and outpatient experience in the surgical sciences, multidisciplinary team-based care, wellness training, and quality improvement skills[4];
- Applying longitudinal training/continuity experiences across the program;
- Assessing not only clinical knowledge and technical skills but also attitudes and values

The training program prioritizes values, aims, and principles of health care services in Vietnam, international competencies for learning and life, and a focus on community, local, national and global health needs.

## 2.3 Program Educational Objectives and Program Learning Outcomes

### 2.3.1 Program Educational Objectives

The program aims to train residents to become doctors, who:

- *Practice comprehensive general surgery*, emphasizing excellence in clinical knowledge and judgment, technical skills, and evidence-based, high-value, compassionate, culturally-competent care
- Acquire training and preparation to be *competitive for subspecialty training*
- Conduct clinical, patient safety, or quality improvement research
- *Educate* patients and colleagues effectively
- *Work collaboratively* and with collegiality in an interdisciplinary team, including competent team leadership

### 2.3.2 Program Learning Outcomes (Learner Outcomes)

After successful completion of the program, residents will acquire the following competencies:

| | |
|---|---|
| **1. Patient Care**<br>Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. Residents must demonstrate proficiency in: | 1.1. Manual dexterity appropriate for their level;<br>1.2. Developing and executing patient care plans appropriate for their level, including management of pain;<br>1.3. Managing patients with severe and complex illnesses and with major injuries;<br>1.4. Essential content areas of: the abdomen and its contents; the alimentary tract; skin, soft tissues, and breast; endocrine surgery; head and neck surgery; pediatric surgery; surgical critical care; surgical oncology; trauma and non-operative trauma; and the vascular system; and,<br>1.5. Managing general surgical conditions arising in transplant patients. |

[4] Thomas S. Huddle et al, Acad Med. 2008, Internal Medicine Training in the 21st Century

| | |
|---|---|
| **2. Medical Knowledge**<br>Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological, and social-behavioral sciences, as well as the application of this knowledge to patient care. Residents must demonstrate proficiency in knowledge of: | 2.1. Critical evaluation of pertinent scientific information;<br>2.2. Fundamentals of basic science as applied to clinical surgery;<br>2.3. Applied surgical anatomy and surgical pathology;<br>2.4. Elements of wound healing;<br>2.5. Homeostasis, shock, and circulatory physiology;<br>2.6. Hematologic disorders;<br>2.7. Immunobiology and transplantation;<br>2.8. Oncology;<br>2.9. Surgical endocrinology;<br>2.10. Surgical nutrition, and fluid and electrolyte balance;<br>2.11. Setabolic response to injury; and,<br>2.12. Burn physiology and initial burn management. |
| **3. Practice-based Learning and Improvement**<br>Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning. Residents are expected to develop skills and habits to be able to meet the following goals: | 3.1. Identify strengths, deficiencies, and limits in one's knowledge and expertise;<br>3.2. Set learning and improvement goals;<br>3.3. Identify and perform appropriate learning activities;<br>3.4. Systematically analyze practice using quality improvement methods, and implement changes with the goal of practice improvement;<br>3.5. Incorporate formative evaluation feedback into daily practice;<br>3.6. Locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems;<br>3.7. Use information technology to optimize learning;<br>3.8. Participate in the education of patients, families, students, residents and other health professionals;<br>3.9. Participate in morbidity and mortality conferences that evaluate and analyze patient care outcomes; and,<br>3.10. Utilize an evidence-based approach to patient care. |
| **4. Interpersonal and Communication Skills**<br>Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals. Residents must: | 4.1. Communicate effectively with patients and their families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;<br>4.2. Communicate effectively with physicians, other health professionals, and health-related agencies;<br>4.3. Work effectively as a member or leader of a health care team or other professional group;<br>4.4. Act in a consultative role to other physicians and health professionals;<br>4.5. Maintain comprehensive, timely, and legible medical records;<br>4.6. Counsel and educate patients and their families; and,<br>4.7. Effectively document practice activities. |
| **5. Professionalism**<br>Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles. Residents must demonstrate: | 5.1. Compassion, integrity, and respect for others;<br>5.2. Responsiveness to patient needs that supersedes self-interest;<br>5.3. Respect for patient privacy and autonomy;<br>5.4. Accountability to patients, society, and the profession;<br>5.5. Sensitivity and responsiveness to a diverse patient population, including diversity in gender, age, culture, race, religion, disabilities, and sexual orientation;<br>5.6. High standards of ethical behavior; and,<br>5.7. Commitment to continuous patient care. |

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| **6. Systems-based Practice**<br>Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care. Residents must: | 6.1. Work effectively in various health care delivery settings and systems relevant to their clinical specialty;<br>6.2. Coordinate patient care within the health care system relevant to their clinical specialty;<br>6.3. Incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population-based care, as appropriate;<br>6.4. Advocate for quality patient care and optimal patient care systems;<br>6.5. Work in inter-professional teams to enhance patient safety and improve patient care quality;<br>6.6. Participate in identifying system errors and implementing potential systems solutions;<br>6.7. Practice high-quality, cost-effective patient care;<br>6.8. Demonstrate knowledge of risk-benefit analysis; and,<br>6.9. Demonstrate an understanding of the roles of different specialists and other health care professionals in overall patient management. |

The seven specific graduate attributes for VinUniversity – College of Health Sciences for the residency programs are listed below:

| # | Specific Graduate Attributes for CHS | Resident Attributes |
|---|---|---|
| 1 | Scholarship/ Research and inquiry | • Apply critical thinking and evidence-based practice when caring for patients and their families.<br>• Demonstrate a basic understanding of research methods. |
| 2 | Lifelong learning/ Information literacy | • Demonstrate pro-active learning, innovation, and an enthusiasm for life-long learning.<br>• Exhibit proficiency in applying knowledge within different contexts.<br>• Efficiently search for and locate evidence that is relevant and reliable to support care decisions, inform practice, and advance knowledge. |
| 3 | Personal and intellectual autonomy | • Demonstrate accurate self-assessment of competence.<br>• Possess independence and motivation to improve practice through advancement of knowledge and skills.<br>• Solicit feedback, demonstrate receptiveness to feedback, and implement change.<br>• Demonstrate accountability for clinical practice and research decisions. |
| 4 | Professional practice and quality health care | • Demonstrate critical thinking.<br>• Apply knowledge and skills effectively in clinical practice, population health, and research.<br>• Recognize limitations in knowledge or skills and seek appropriate consultation from other health care professionals.<br>• Demonstrate evidence-based, high quality care for all patients and families. |
| 5 | Ethical, social, and professional accountability and responsibility | • Develop a personal and professional sense of responsibility to contribute to local, national, and global communities.<br>• Uphold all legal regulations and ethical standards.<br>• Provide patient-centered care that respects each patient's individuality, culture, and autonomy in making health care decisions. |
| 6 | Communication | • Recognize the importance of communication for learning, patient care, and interdisciplinary collaboration. |

| | | |
|---|---|---|
| | | • Possess interpersonal and communication skills to effectively present ideas using different methods, including information and communication technology.<br>• Demonstrate effective communication with patients, their families, and with interdisciplinary team members to optimize patient care and provide coordinated care. |
| 7 | Collaboration/ Leadership and teamwork | • Demonstrate respect for and work effectively with all members of an interdisciplinary team.<br>• Demonstrate enthusiasm and proficiency in management of time and the promotion of learning for others.<br>• Demonstrate professional practice in leadership, interdisciplinary teamwork, and patient care. |

## 3. CURRICULUM STRUCTURE

### *3.1* Curriculum Composition

The General Surgery Residency Program is to be completed within six years on a full-time basis. The curriculum consists of 378 credits.

MOH (2006) requires a minimum of 150 educational credits for all residency training programs, regardless of the specialty. CHS General Surgery Residency Program fulfills this requirement in the following way:

| No | Area of Study | Number of Credits | Credit Distribution |
|---|---|---|---|
| 1 | Compulsory Courses by MOH | 17 | 4.50% |
| 2 | Supporting Courses | 3.5 | 0.93% |
| 3 | Core Clinical Rotations | 347.5 | 91.93% |
| 4 | Graduation Thesis | 10 | 2.65% |
| **Total** | | **378** | **100%** |

## 3.2 Courses and Credit Distribution by Courses

**Compulsory Courses by MOH** ***17 credits (17 theory, 0 practice)***

| No | Subjects/ Education Units | Course code | Level | Credits | Distribution | |
|---|---|---|---|---|---|---|
| | | | | | Theory | Practice |
| 1 | Marxism-Leninism Philosophy (Philosophy Science and Society) | HASS1010 | PGY1 | 3 | 3 | 0 |
| 2 | Research Methods and Evidence-Based Medicine | CCSC6142 | PGY1 | 2 | 2 | 0 |
| 3 | Medical English | ENGL6011 | PGY1 & PGY2 | 10 | 10 | 0 |
| 4 | Medical Pedagogy | PEDA6011 | PGY1 & PGY2 | 2 | 2 | 0 |

**Supporting Courses** ***3.5 credits (0.5 theory, 3 practice)***

| No | Subjects/Education Units | Course code | Level | Credits | Distribution | |
|---|---|---|---|---|---|---|
| | | | | | Theory | Practice |
| 5 | Core Clinical Skills | CCSC6160 | PGY1 | 3.5 | 0.5 | 3 |

**Core Clinical Rotations** ***347.5 credits (69.5 theory, 278 practice)***

| No | Subjects/Rotation Blocks | Course code | Level | Weeks | Credits | Distribution | | Site |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Theory | Practice | |
| 6 | Anesthesia | SURR6100 | PGY1 | 2 | 2.5 | 0.5 | 2 | VMTC |
| 7 | Surgery 1 | SURR6011 | PGY1 | 8 | 10 | 2 | 8 | VMTC |
| 8 | Acute Care and Trauma 1 | SURR6131 | PGY1 | 4 | 5 | 1 | 4 | BM |
| 9 | Vascular Surgery 1 | SURR6161 | PGY1 | 4 | 5 | 1 | 4 | BM |
| 10 | Hepatobiliary and Transplant Surgery 1 | SURR6181 | PGY1 | 8 | 10 | 2 | 8 | M108 |
| 11 | Colorectal Surgery 1 | SURR6121 | PGY1 | 8 | 10 | 2 | 8 | M108 |
| 12 | Surgical Intensive Care Unit 1 | SURR6111 | PGY1 | 8 | 10 | 2 | 8 | M108 |
| 13 | Vascular Surgery 2 | SURR6162 | PGY2 | 4 | 5 | 1 | 4 | VMTC |
| 14 | Gastrointestinal Surgery 2 | SURR6142 | PGY2 | 8 | 10 | 2 | 8 | M108 |
| 15 | Colorectal Surgery 2 | SURR6122 | PGY2 | 8 | 10 | 2 | 8 | M108 |
| 16 | Hepatobiliary and Transplant Surgery 2 | SURR6182 | PGY2 | 8 | 10 | 2 | 8 | M108 |
| 17 | Surgical Intensive Care Unit 2 | SURR6112 | PGY2 | 4 | 5 | 1 | 4 | M108 |
| 18 | Surgical Emergency Department 2 | SURR6032 | PGY2 | 4 | 5 | 1 | 4 | M108 |
| 19 | Acute Care and Trauma 2 | SURR6132 | PGY2 | 4 | 5 | 1 | 4 | BM |
| 20 | Surgical Electives 2 | SURR6202 | PGY2 | 8 | 10 | 2 | 8 | No fixed location |
| 21 | Surgery 3 | SURR6013 | PGY3 | 8 | 10 | 2 | 8 | VMTC |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 22 | Gastrointestinal Surgery 3 | SURR6143 | PGY3 | 8 | 10 | 2 | 8 | M108 |
| 23 | Colorectal Surgery 3 | SURR6123 | PGY3 | 4 | 5 | 1 | 4 | M108 |
| 24 | Surgical Intensive Care Unit 3 | SURR6113 | PGY3 | 4 | 5 | 1 | 4 | M108 |
| 25 | Thoracic Surgery 3 | SURR6153 | PGY3 | 8 | 10 | 2 | 8 | M108 |
| 26 | Vascular Surgery 3 | SURR6163 | PGY3 | 8 | 10 | 2 | 8 | M108 |
| 27 | Breast Surgery | SURR6050 | PGY3 | 8 | 10 | 2 | 8 | M108 |
| 28 | Surgery 4 | SURR6014 | PGY4 | 4 | 5 | 1 | 4 | VMTC |
| 29 | Endoscopy (GI Medicine) | SURR6081 | PGY4 | 4 | 5 | 1 | 4 | VMTC |
| 30 | Gastrointestinal Surgery 4 | SURR6144 | PGY4 | 12 | 15 | 3 | 12 | M108 |
| 31 | Hepatobiliary and Transplant Surgery 4 | SURR6184 | PGY4 | 10 | 12.5 | 2.5 | 10 | M108 |
| 32 | Pediatric Surgery | SURR6170 | PGY4 | 8 | 10 | 2 | 8 | NCH |
| 33 | Surgical Electives 4 | SURR6204 | PGY4 | 8 | 10 | 2 | 8 | No fixed location |
| 34 | Surgery 5 | SURR6015 | PGY5 | 8 | 10 | 2 | 8 | VMTC |
| 35 | Thoracic Surgery 5 | SURR6155 | PGY5 | 8 | 10 | 2 | 8 | M108 |
| 36 | Surgical Electives 5 | SURR6200 | PGY5 | 30 | 37.5 | 7.5 | 30 | No fixed location |
| 37 | Surgical Electives 6 | SURR6201 | PGY6 | 46 | 57.5 | 11.5 | 46 | No fixed location |

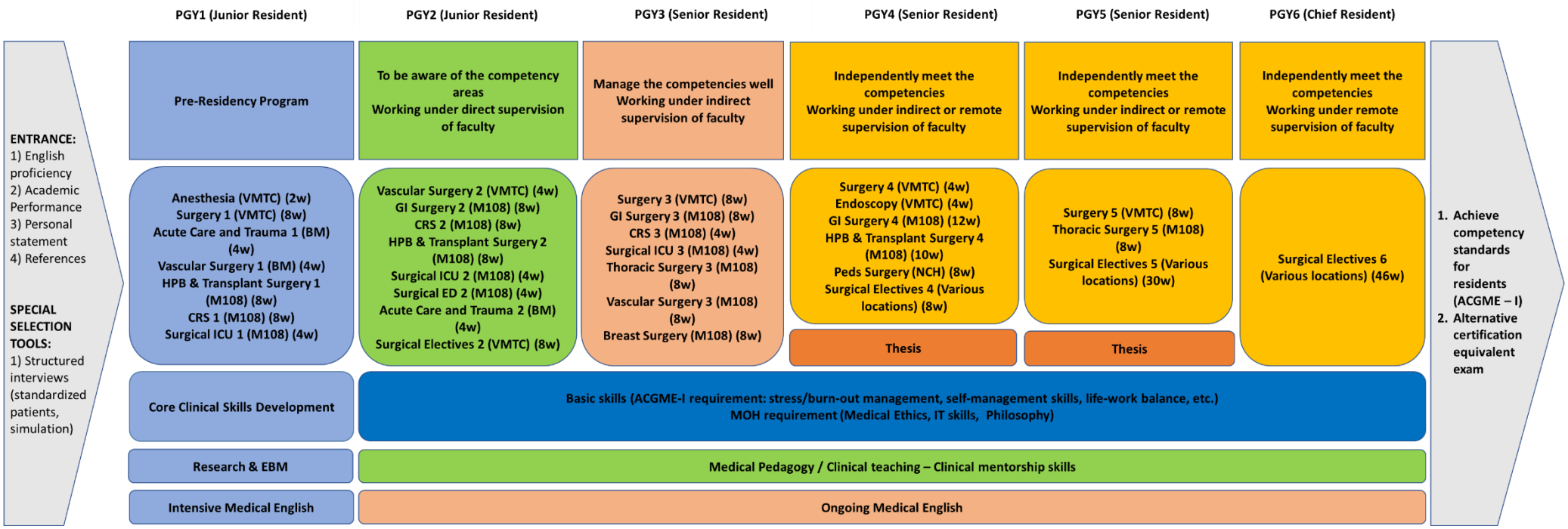
**Site Abbreviations:**

- VMTC: Vinmec Times City International Hospital
- M108: Military 108 Central Hospital
- NCH: National Children's Hospital
- BM: Bach Mai Hospital

**Graduation Thesis** ***10 credits (0 theory, 10 practice)***

| No | Subjects/Education Units | Course code | Level | Total credits | Distribution | |
|---|---|---|---|---|---|---|
| | | | | | Theory | Practice |
| 38 | Thesis | SURR6890 | PGY 4 & PGY5 | 10 | 0 | 10 |

## 3.2 Curriculum Block & Study Plan




**In general:**

- There will be maximum 4 residents per class.
- Each resident has 4 weeks of vacation per year.

**Rotations at teaching sites**

- During all program years (Residency years 1-6): Residents will rotate in Military 108, Bach Mai, and Vinmec Hospitals.
- In the fourth program year (Residency year 4): In addition to rotations in Military 108, Bach Mai, and Vinmec Hospitals, residents will spend 8 weeks at National Children's Hospital to complete the Pediatric Surgery requirements.

**At the end of third program year** (Residency year 3):

- Residents will begin to be layered on top of first year residents on some rotations. This is to provide direct supervision of intern activities with respect to patient care as well as provide opportunities for these residents to begin to have clinical and teaching responsibilities.
- Residents will be expected to be able to perform the following procedures unsupervised: Central venous and arterial catheter placement, tube thoracostomy, endotracheal intubation, EGD, and cricothyroidotomy, appendectomy.

**In the fourth program year** (Residency year 4):
- Residents will begin to function as senior level residents and will have the opportunity to lead the surgical service.

**During the fifth and sixth program years** (Residency years 5 and 6):
- Residents will be the acting chiefs of their services. As such they will function with a high level of autonomy and will be in charge of the daily activities of their services. They will also be responsible for educating junior residents and medical students.
- A total of 92 weeks (8 in PYG2, 8 in PGY4, 30 in PGY5, and 46 in PGY6) of elective time will be allowed. Electives must take place at the teaching hospitals. This is done to allow residents to get further training within specific areas of their interests within the broad field of surgery. Therefore, all electives must be personally approved by the program director.

**Outpatient Clinic**
- Each resident will be responsible for participating in patient care in the outpatient clinic associated with their specific rotation for at least one half day per week. This only applies to appropriate rotations (i.e. no outpatient clinic responsibility during SICU rotations).

**Conferences**
- Residents will be required to attend both a weekly didactic session focusing on the core principles of surgery and a weekly case conference. These conferences will be held at a central location. All residents are mandated to attend and thus cannot be given clinical responsibilities during this time.

**Thesis**
- PGY4 & PGY5 residents have a 2-week rotation each residency year to meet the thesis requirements. They will use this time to collect data, research and write their thesis.

### 3.4 Course Descriptions

#### 3.4.1 Compulsory Courses by MOH

***Marxism-Leninism Philosophy (Philosophy Science and Society) (HASS1010, 3 credits, 3 theory, 0 practice) – PGY1 at VinUni campus***

Philosophy will help residents achieve VinUni's learning outcomes related to their qualities, abilities, critical thinking, national pride and global awareness as outlined in the Competency Framework of VinUni learners.

***Research Methods and Evidence-Based Medicine (CCSC6142, 2 credits, 2 theory, 0 practice) – PGY1 at VinUni campus***

The Medical Research and Evidence-Based Medicine (EBM) course provides an overview on the research process, research methods, and EBM. Specific topics covered in this course include introduction to public health, study design, measures of disease, formulation of research questions using the PICO (Population/Patient, Intervention, Control/Comparison, Outcome) format, and EBM. Learners will learn to apply research methods and EBM into patient care scenarios to as well as into scholarship. The Learning objectives of this course includes recognizing the importance of research and evidence-based medicine; summarizing the steps needed to practice evidence-based medicine; demonstrating proficiency in formulating a research question using the PICO framework; describing the process to conduct a literature search; learning to effectively facilitate a journal club session.

***Medical English (ENGL6011, 10 credits, 10 theory, 0 practice) – PGY1 at various locations***

As required by the Vietnam Ministry of Health, residents must achieve a Vietnamese Standardized Test of English Proficiency (VSTEP) Level 4 certificate or equivalent prior to graduation. Residents who hold a VSTEP Level 3 or equivalent are exempt from the Medical English course but must attain VSTEP Level 4 or equivalent before completing their program. Residents who do not meet the exemption criteria are required to enroll in the Medical English course.

The Medical English course at VinUniversity consists of three components totaling 150 hours: English for Communication (25 hours), Applied Medical English (25 hours), and 100 hours of online self-accessed study using SLC English for Doctors. The course is designed to strengthen residents' English language skills and enhance their communicative competence in professional medical settings. It also focuses on developing essential communicative and academic skills beneficial to their future careers.

Residents enrolled in the course will take an initial placement test and a final proficiency assessment to evaluate whether they have achieved VSTEP Level 4 equivalency. The course will be graded on a pass/fail basis, determined by participation, attendance, and satisfactory completion of assignments.

***Medical Pedagogy (PEDA6011, 2 credits, 2 theory, 0 practice) – PGY1 & PGY2 at various locations***

The overarching goal of this course is to equip residents with the knowledge, skills, and professional attitudes necessary to effectively understand and apply core concepts in medical education within their clinical practice. The course aims to strengthen residents' ability to develop competencies in teaching, supervision and assessment of junior trainees, feedback delivery, maintaining wellbeing, and professionalism.

This course will be divided into two parts within the residency program. Part 1 consists of five workshops, delivered during the Core Clinical Skills course in the PGY-1 year. Part 2 comprises four half-day workshops, scheduled as residents transition into senior roles—ideally at the end of PGY-2 or the beginning of PGY-3 in a four- to five-year program. Participation in both parts is mandatory for all residents across Graduate Medical Education (GME) programs.

A variety of teaching methods will be employed, including didactic lectures, facilitated small-group discussions, case-based learning, and role plays to enhance engagement and practical skill development.

### 3.4.2 Supporting Courses

***Core Clinical Skills (CCSC6160, 3.5 credits, 0.5 theory, 3 practice) – PGY1 at VinUni campus***

Core Clinical Skills Course focuses on common topics of pharmacotherapy which are essential for all residents regardless of their specialty, communication skills and simulation training and clinical procedural skills.

Pharmacotherapy reinforces reviewing of antibiotic classes, PK/PD of antibiotics and antimicrobial stewardship aim to:

- Understand the pharmacokinetic and pharmacodynamic principles for the most common antimicrobials in hospital settings
- Optimize the antimicrobial dosing based on Pharmacokinetic and Pharmacodynamic Principles
- Review the current challenge of antibiotic resistance
- Outline components of an effective stewardship program
- Understand the role of prescribers in antibiotic stewardship program

Communication skills reinforce core principles focused on professionalism, interpersonal and communication skills, and effective patient care. The residents will practice in detail scenarios such as breaking bad news, medical errors and disclosure, interprofessional communication and obtaining patient consent. These scenarios will help residents recognize the key role of communication in patient care and interprofessional collaboration, demonstrate effective communication in a variety of settings including obtaining patient consent, medical error disclosure, breaking bad

news, and end of life care planning and describe medical professionalism and the fundamental principles and professional responsibilities.

The Simulation Training and Clinical Procedural Skills sessions utilize a variety of teaching pedagogies to develop practical skills required for all residents. The curriculum includes a combination of didactic lectures, small-group learning, and simulation activities that are primarily conducted at the VinUniversity Simulation Center. Core content covered in this course includes Basic Life Support (BLS), Advanced Cardiovascular Life Support (ACLS), and Pediatric Advanced Life Support (PALS) training as well as communication skills training, procedural skills training, and mock code simulations. These sessions aim to:

- Attain certification in BLS, ACLS and/or PALS.
- Practice advanced life support skills in clinical scenarios in a simulated setting.
- Understand the indications, contraindications, potential complications, anatomic considerations, required equipment, and expected outcomes for procedures that are commonly performed in the clinical setting.
- Develop proper and safe basic techniques for procedures that are commonly performed in the clinical setting to facilitate future deliberate practice in the simulation and clinical setting.

### 3.4.3 Core Clinical Rotations

***Anesthesia (SURR6100, 2.5 credits, 0.5 theory, 2 practice) – PGY1 at VMTC***

In the operating theatre, anesthesiologists and surgeons must work closely together to provide the absolute best care for the patient. Furthermore, airway management is a critical set of skills that all surgeons must possess. During this rotation, residents will work in the operating theatre under the direct supervision of the attending anesthesiologist. They will learn all aspects of non-surgical airway management from direct laryngoscopy to fiberoptic intubation, gain a basic knowledge of inhalational, regional and intravenous anesthesia, and have the opportunity to perform arterial and central venous line placement.

***Surgery 1 (SURR6011, 10 credits, 2 theory, 8 practice) – PGY1 at VMTC***
***Surgery 3 (SURR6013, 10 credits, 2 theory, 8 practice) – PGY3 at VMTC***
***Surgery 4 (SURR6014, 5 credits, 1 theory, 4 practice) – PGY4 at VMTC***
***Surgery 5 (SURR6015, 10 credits, 2 theory, 8 practice) – PGY5 at VMTC***

Residents will rotate through a combined surgery service at VMTC during most years of their residency. During the PGY1 year this rotation will provide an introduction to inpatient surgery. However, as the residents progress through the program, it will serve as the penultimate rotation for the senior residents to demonstrate their broad knowledge of the surgical sciences. The core surgical specialties of this service will include: gastrointestinal surgery, hepatobiliary surgery, breast surgery, urology and orthopedic surgery. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and

skills as determined by the teaching faculty. This rotation is meant to become a major cornerstone of the training residents receive from this program. It is also specifically designed with the expectation that it will continue to grow and evolve with the changing needs of the program.

***Hepatobiliary and Transplant Surgery 1 (SURR6181, 10 credits, 2 theory, 8 practice) – PGY1 at M108***
***Hepatobiliary and Transplant Surgery 2 (SURR6182, 10 credits, 2 theory, 8 practice) – PGY2 at M108***
***Hepatobiliary and Transplant Surgery 4 (SURR6184, 12.5 credits, 2.5 theory, 10 practice) – PGY4 at M108***
On this rotation, residents will gain exposure to surgery for benign and malignant diseases of the pancreas, liver and biliary tract. Residents will work under the direct supervision of the attending hepatobiliary surgeons. Learning will occur on ward rounds, in the operating theatre and the outpatient clinic. Prior to graduation residents will be expected to be proficient at performing pancreatectomy, partial hepatectomy, and biliary and pancreatic anastomosis under supervision. Furthermore, they will possess the knowledge to appropriately work up patients with pancreatic and liver masses and demonstrate an understanding of the staging systems used in cancers of the pancreas and biliary tract. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and skills as determined by the teaching faculty.

***Gastrointestinal Surgery 1 (SURR6141, 5 credits, 1 theory, 4 practice) – PGY1 at M108***
***Gastrointestinal Surgery 2 (SURR6142, 10 credits, 2 theory, 8 practice) – PGY2 at M108***
***Gastrointestinal Surgery 3 (SURR6143, 10 credits, 2 theory, 8 practice) – PGY3 at M108***
***Gastrointestinal Surgery 4 (SURR6144, 15 credits, 3 theory, 12 practice) – PGY4 at M108***
Understanding the pre-operative, intraoperative and post-operative management of patients with surgical diseases affecting the alimentary tract is critical to becoming a general surgeon. By the time of graduation, residents will be expected to be proficient in the workup and management of patients with appendicitis, biliary disease, ventral hernia, umbilical hernia, inguinal hernia, esophageal reflux, peptic ulcer disease, small bowel obstruction, hiatal hernia, and achalasia. Residents will work under the direct supervision of the attending surgeon as well as senior residents on the service. Learning will occur on ward rounds, in the operating theatre as well as the outpatient clinic. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and skills as determined by the teaching faculty.

***Colorectal Surgery 1 (SURR6121, 5 credits, 1 theory, 4 practice) – PGY1 at M108***
***Colorectal Surgery 2 (SURR6122, 10 credits, 2 theory, 8 practice) – PGY2 at M108***
***Colorectal Surgery 3 (SURR6123, 5 credits, 1 theory, 4 practice) – PGY3 at M108***
On this rotation, residents will gain exposure to surgery for benign and malignant diseases of the lower gastrointestinal tract. Residents will work under the direct supervision of the attending colorectal surgeons. Learning will occur on ward rounds, in the operating theatre and the outpatient clinic. Prior to graduation residents will be expected to be proficient at performing colectomy (left and right) for both benign and malignant disease, hemorrhoidectomy, fistulotomy and the surgical management of pilonidal disease. Furthermore, they will possess the knowledge to appropriately work up and manage patients with suspected inflammatory bowel disease and demonstrate an understanding of the staging system and multidisciplinary approach used for colon and rectal cancers. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and skills as determined by the teaching faculty.

***Vascular Surgery 1 (SURR6161, 10 credits, 2 theory, 8 practice) – PGY1 at BM***
***Vascular Surgery 2 (SURR6162, 5 credits, 1 theory, 4 practice) – PGY2 at VMTC***
***Vascular Surgery 3 (SURR6163, 10 credits, 2 theory, 8 practice) – PGY3 at M108***
General surgeons must have a firm grasp on the pre-operative, intraoperative and post-operative management of patients with vascular disease. Specifically, this rotation will focus on peripheral arterial disease, aortic aneurysms, surgery for cerebrovascular disease and vascular access surgery for patients with end stage renal disease (ESRD). Residents will work under the direct supervision of the attending vascular surgeons as well as senior residents on the service. Learning will occur on ward rounds, in the operating theatre as well as the outpatient clinic. Prior to graduation residents will be expected to be proficient at the skills necessary to perform a vascular anastomosis, vessel repair, and carotid and femoral endarterectomy. Furthermore, they must understand the management of patients with aneurysmal disease of the aorta and appropriately workup patients being considered for arteriovenous fistula creation for ESRD.

***Surgical Intensive Care Unit 1 (SURR6111, 5 credits, 1 theory, 4 practice) – PGY1 at M108***
***Surgical Intensive Care Unit 2 (SURR6112, 5 credits, 1 theory, 4 practice) – PGY2 at M108***
***Surgical Intensive Care Unit 3 (SURR6113, 5 credits, 1 theory, 4 practice) – PGY3 at M108***
Residents will spend dedicated time during their residency years in the Surgical Intensive Care Unit at Military 108 to gain the knowledge and skills on critical care. During this rotation they will learn the advanced knowledge and skills necessary to specifically manage critically ill trauma and complex post-operative patients such as cardiac, vascular and transplant patients.

***Thoracic Surgery 3 (SURR6153, 10 credits, 2 theory, 8 practice) – PGY3 at M108***
***Thoracic Surgery 5 (SURR6155, 10 credits, 2 theory, 8 practice) – PGY5 at M108***
On this rotation, residents will gain exposure to surgery for benign and malignant diseases of the chest. Residents will work under the direct supervision of the attending cardiac and thoracic surgeons. Learning will occur on ward rounds, in the operating theatre and the outpatient clinic. Prior to graduation residents will be expected to be proficient at the skills necessary for tube thoracostomy, thoracotomy, and wedge resection and lobectomy. Furthermore, they will possess the knowledge to appropriately work up and manage patients with a spontaneous pneumothorax and newly diagnosed lung mass. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and skills as determined by the teaching faculty.

***Breast Surgery (SURR6050, 10 credits, 2 theory, 8 practice) – PGY3 at M108***
Residents will rotate on this service for 8 weeks during the PGY3 year. As with all surgery rotations, operative participation, autonomy, and case complexity will increase as the resident gains appropriate knowledge and skills as determined by the teaching faculty.

Surgery is central to the management of both benign and malignant diseases of the breast. During this rotation, residents will work under the supervision of surgeons performing breast surgery in the Gynecology Department of 108 hospital. Teaching will be done in the outpatient clinics, wards and operating theatre. They will also attend tumor board and be expected to actively participate in the discussion and presentations of patients.

By graduation residents will be expected to be able to perform the appropriate workup of: 1) palpable breast masses (both malignant and benign), 2) abnormal breast imaging, 3) nipple discharge and appropriate operative and/or non-operative intervention for each. They will also become knowledgeable of the multidisciplinary approach to breast cancer and the roles medicine and radiation play in adjuvant and neoadjuvant treatment. They will further be expected to appropriately understand breast cancer staging and prognosis and become competent at interpreting radiologic studies of the breast including mammograms, ultrasound and breast MRI.

***Pediatric Surgery (SURR6170, 10 credits, 2 theory, 8 practice) – PGY4 at NCH***
The surgical diseases and management of pediatric patients are vastly different from those in adult surgery. In some settings, the general surgeon must provide surgical care to pediatric patients presenting with basic pediatric surgical diseases such as hernias as well as those needing emergency surgical intervention. During this rotation residents will work under the close supervision of attending pediatric surgeons at the National Children's Hospital. They will be expected to become proficient in the pre-operative, operative, and post-operative management of pediatric patients with inguinal hernia, umbilical hernia, hypertrophic pyloric

stenosis (HPS), and appendicitis as well as emergency conditions including necrotizing enterocolitis, midgut volvulus, intussusception and trauma. They will further be expected to gain knowledge regarding congenital conditions requiring surgical care including gastroschisis, omphalocele, congenital diaphragmatic hernia, trachea-esophageal fistula as well as become proficient in performing the initial workup and management of newborns with these conditions.

***Endoscopy (SURR6081, 5 credits, 1 theory, 4 practice) – PGY4 at VMTC***

Colonoscopy, esophagogastroduodenoscopy (EGD), and bronchoscopy are important diagnostic and therapeutic procedures that all surgeons must be able to perform efficiently and safely. Indeed proficiency in these procedures is mandated by the ACGME-I which requires that all residents complete 35 EGDs and 50 colonoscopies prior to graduation. During two 4-week periods in the PGY2 year, residents will work with attending gastroenterologists and surgeons to perform EGD, colonoscopy and bronchoscopy under the direct supervision of these attendings. By the end of their endoscopy rotations residents will be expected to be proficient to perform these procedures independently.

***Acute Care and Trauma 2 (SURR6132, 5 credits, 1 theory, 4 practice) – PGY2 at BM***

The rotation in Acute Surgical Care and Trauma at Bach Mai Hospital, Hanoi is pivotal for developing competent and resilient surgeons. As the busiest hospital in the city, Bach Mai offers a unique and intensive learning environment where residents are exposed to a high volume and variety of acute and trauma cases.

This rotation provides hands-on experience in managing complex trauma and emergency surgical situations, which are essential skills for any general surgeon. The high patient turnover ensures that residents encounter a wide range of clinical scenarios, from polytrauma to severe acute conditions, facilitating rapid decision-making and enhancing clinical acumen.

The resident will have chance to work alongside emergency medicine, anesthesiology, and critical care teams, residents learn to coordinate care effectively, a critical aspect of modern surgical practice. This collaborative approach not only improves patient outcomes but also builds essential teamwork and communication skills.

***Surgical Electives 2 (SURR6202, 10 credits, 2 theory, 8 practice) – PGY2 at various locations***

***Surgical Electives 4 (SURR6204, 10 credits, 2 theory, 8 practice) – PGY4 at various locations***

***Surgical Electives 5 (SURR6200, 37.5 credits, 7.5 theory, 30 practice) – PGY5 at various locations***

***Surgical Electives 6 (SURR6201, 57.5 credits, 11.5 theory, 46 practice) – PGY6 at various locations***

During the PGY2, PGY4, PGY5 and PGY6 years, residents will be allowed to work on rotations of their choice within the teaching hospitals of the General Surgery Residency program (VMTC, M108, NCH or BM). These are intended to allow residents to receive further training in specific areas of surgery which interest them, or which may be critical to any specialized training they wish to receive after completing the residency. A total of 92 weeks of elective time will be allowed. All elective rotations must be personally approved by the program director prior to the start of any academic year.

### 3.4.1 Graduation Thesis

***Thesis (SURR6890, 10 credits, 0 theory, 10 practice) – PGY4 & PGY5 at various locations***

PGY4, PGY5 & PGY6 residents will be allocated a dedicated 2-week rotation each residency year outside their clinical rotation schedule, supplemented with additional time, to formulate a research proposal, obtain Institutional Review Board (IRB) approval, engage in research activities, compose their thesis, and subsequently defend it.