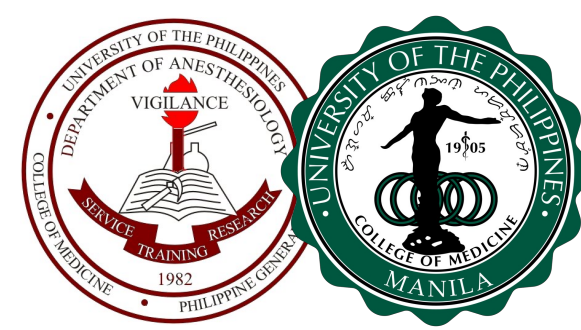


Master of Clinical Science in Anesthesiology (_____Subspecialty)

An Outcome Based Integrated Academic-Clinical (Interdisciplinary)
Program for Obstetric Anesthesia Fellowship

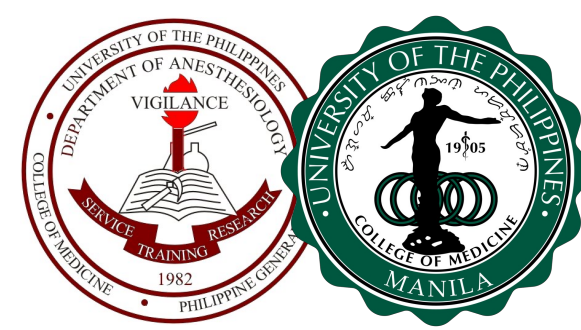
Introduction



- Department of Anesthesiology aligned with the mandate of the UP Manila College of Medicine to produce graduates who epitomize a **6-star physician**
 - A compassionate care provider
 - A decision maker
 - A communicator
 - A community leader
 - A manager of multidisciplinary teams
 - A scientist with national fervor



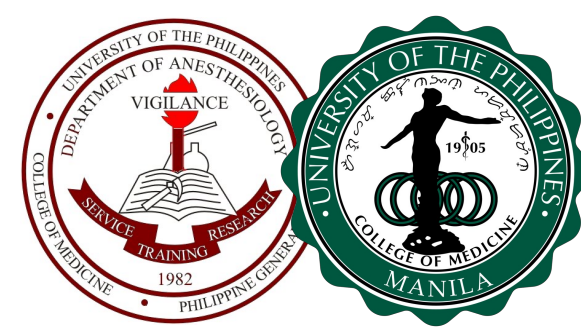
Masters of Clinical Science in Anesthesiology



- An outcome based integrated academic and clinical program for residents and fellows in training
- Cater to graduates of the Anesthesia residency who wish to pursue a advanced subspecialty training

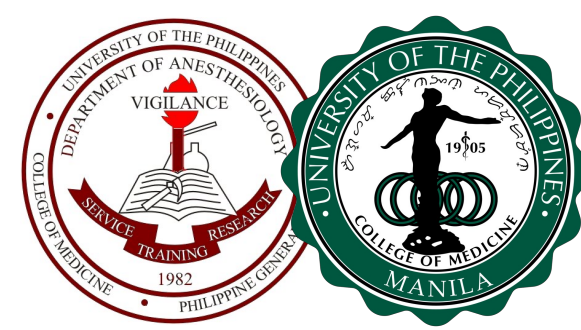


Rationale for the Development of MCS Anesthesiology



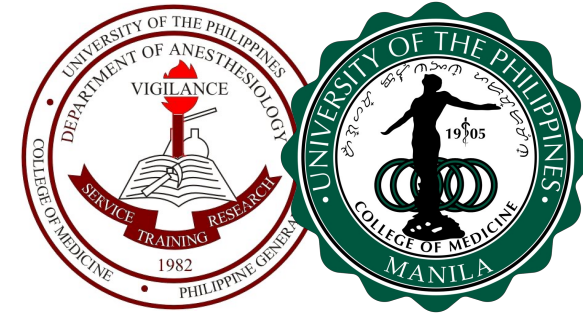
- As of the moment, the Philippine Board of Anesthesiology has yet to formalize accreditation of advanced training programs in Anesthesiology
- The MCS program in Anesthesiology is envisioned to formally integrate the academic and clinical domains of advanced training in anesthesiology
- The program aims to produce a holistic anesthesiologist, evidence-based and research driven with advanced academic expertise and skill in a specific subspecialty in anesthesiology





- The MCS (Anesthesiology) Program is a two year program intended for senior residents who decide and qualify for a post-graduate subspecialty clinical training integrated with an academic program.
- This includes 30 units (including a completed research project as a Special Project course) to be completed in two years.
- Once the senior resident decides on a subspecialty, he/she will enroll in the major courses during his /her senior year specific to the subspecialty.
 - A flexible program, in which the major course work may be completed within the duration of senior and the core and elective courses during fellowship training
 - This program allows us to assign academic credits into the fellowship training program activities

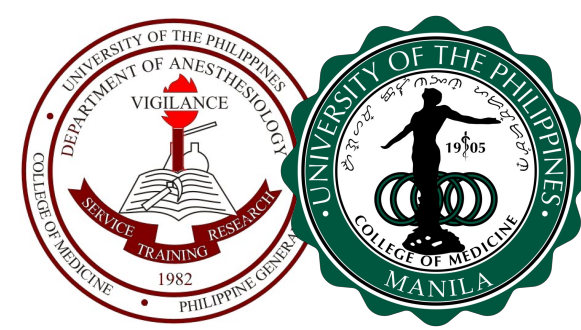
Program Learning Outcomes



- The program aims to develop a graduate who is a:
 - **professional clinician,**
 - **competent educator,**
 - **researcher with national fervor and a**
 - **manager of multidisciplinary teams.**



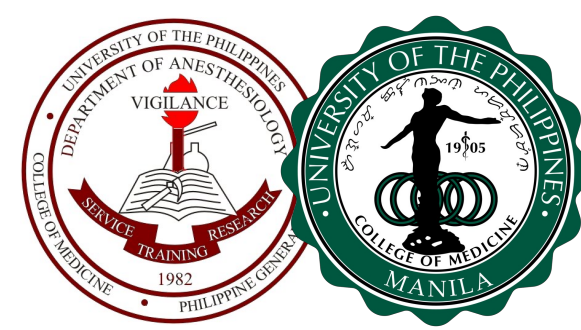
MCS (OB Anesthesia) Faculty Coordinators



- Program Director: Ma. Concepcion L. Cruz
- Faculty:
 - Members of the Division of Obstetric Anesthesia
 - Christine Ang-Suarez, MD
 - Carlo Catabijan, MD
 - Mark Andrew Cruz
 - Grace Anne B Herbosa, MD
 - Alexandra Nina Odi, MD
 - Tygran Romeo Odi, MD
 - Edgard Simon, MD
 - Faculty with graduate studies / Courses in Simulation
 - Grace Catalan, MD
 - Winnete Enecio-Tayao MD
 - Antonio Mangubat, MD
 - Mary Ellen Chiong-Perez
 - Karl Sy-Su



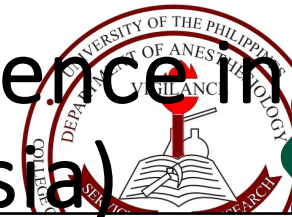
Total Number of Units: 30



- Student must enroll in a total of at least 30 units
- Mandatory courses: CORE+ MAJOR = 11+ 11 = 22 units
 - Elective course = 8 units



Program Structure Master of Clinical Science in Anesthesiology (Obstetric Anesthesia)

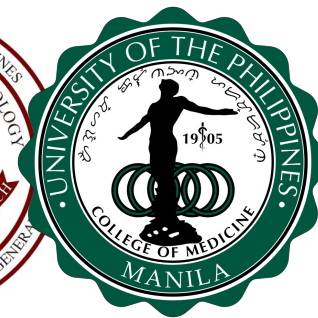


| CORE COURSES | | MAJOR COURSES | | ELECTIVE COURSES | |
|--|---|---|---|---|---|
| CE 211: Fundamentals of Clinical Epidemiology | 2 | OB ANES 2__: Applied Anatomy & Physiology in Critical Obstetric Anesthesia | 2 | CE 201: Concepts of Clinical Economics and Health Social Sciences | 2 |
| CE 212: Basic Clinical Research Methodology | 2 | OB ANES 2__: Medical Therapeutics in High Risk Obstetric Anesthesia | 2 | CE 218: Ethics in Research | 1 |
| CS 221: Teaching Strategies in Clinical Medicine | 2 | OB ANES 2__: Seminars in Obstetric Anesthesiology | 2 | CE 224: Medical Writing and Presentation | 2 |
| CS 273: Introduction to Quality Improvement and Health Systems Management | 2 | OB ANES2__: Clinical Correlates in Anesthesiology | 2 | HP 201: Psycho-Philosophical Foundation of Teaching and Learning in Health Sciences | 2 |
| CS 298: Special Project | 3 | OB ANES 2__: Simulation in Obstetric Anesthesia | 3 | HP 223: Clinical Teaching and Evaluation of Clinical Competence | 2 |
| | | | | HI 201: Health Informatics | 3 |
| | | | | Med Anthro 221: Political Economy and Social Epidemiology | 3 |
| | | | | *May enroll in any other courses available in UP Manila upon the approval of the Course Adviser | |

REQUIRED UNITS **11**

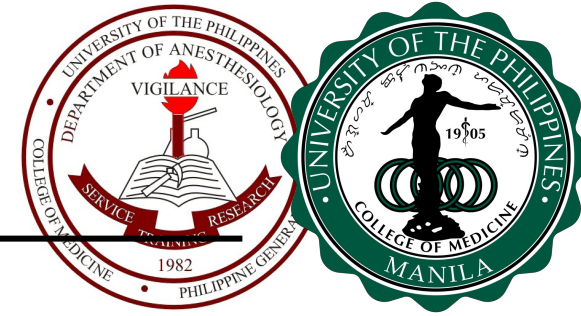
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Core Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|--|---|-------------------------|
| CE 211 | Fundamentals of Clinical Epidemiology | Introduction to scientifically appropriate ways of identifying and solving problems in human biology, clinical medicine and health care. | 2 (32 hours) |
| CE 212 | Basic Clinical Research Methodology | General strategies of health research including design. (CE 211 is a prerequisite) | 2 (32 hours) |
| CS 221 | Teaching Strategies in Clinical Medicine | Development of a design of a unit of instruction within the participant's area of teaching with particular consideration of the different available methods of instruction and their appropriateness for specific instructional situations in the health fields | 2 (32 hours) |

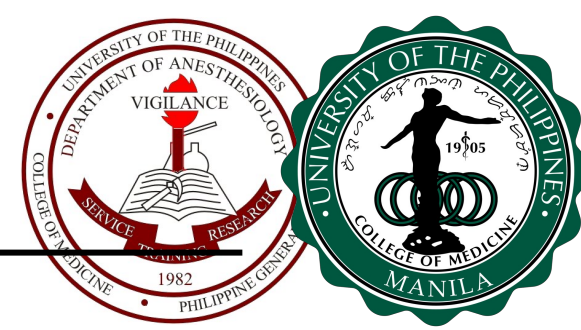
Core Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---|---|-------------------------|
| CS 273 | Introduction to Quality Improvement and Health Systems Management | Appropriate settings for healthcare quality improvement such as management in health systems, including but not limited to the hospital and healthcare environment, which embodies a holistic and multidisciplinary integration, with emphasis on prevention across risk factors to maximize disease prevention via a 'whole system' approach | 2 (32 hours) |
| CS 298 | Special Project | Culminating project with the application of learned skills | 3 (48 hours) |

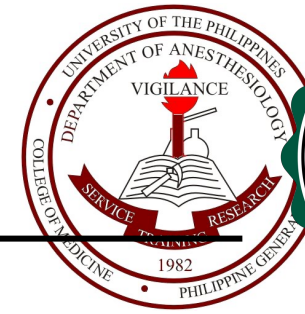


Elective Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---|--|-------------------------|
| CE 201 | Concepts of Clinical Economics and Health Social Sciences | Essential concepts in clinical economics and health social sciences | 2 (32 hours) |
| CE 218 | Ethics in Research | Application of ethical principles in daily clinical practice, in dealing with controversies in patient management and in the conduct of research. This includes attendance in GRP workshop | 1 (16 hours) |
| CE 224 | Medical Writing and Communications | Techniques of medical writing and communications. | 2 (32 hours) |

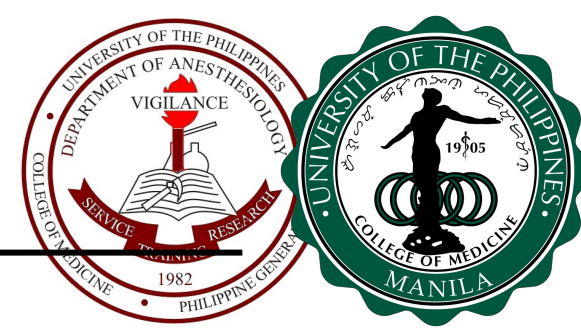
Elective Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---|---|-------------------------|
| HP 201 | Psycho-Philosophical Foundation of Teaching and Learning in the Health Sciences | Principles of philosophy and psychology pertinent to educational situations in the health professions that forms the basis for the teaching learning of the health professional | 2 (32 hours) |
| HP 223 | Clinical Teaching and Evaluation of Clinical Competence | Development of a model of clinical problem solving; strategies to teach it; construction and implementation of evaluative instruments to assess it; interpretation and utilization of their results | 2 (32 hours) |



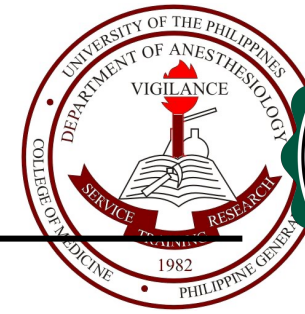
Elective Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|----------------|---|--|-------------------------|
| HI 201 | Health Informatics | Introduction to health informatics. Students will examine how health information systems can help achieve universal healthcare. Through project-based learning, students will explore real world problems and challenges in health informatics, while making learning visible through lively forum discussions, tweets and blog posts. | 3 (48 hours) |
| Med Anthro 221 | Political Economy and Social Epidemiology | A study of the relationships between economic, politics and health, including State policies and laws, private sector initiatives and civil society. The course will also look into how social capital is created and mobilized for health care | 3 (48 hours) |



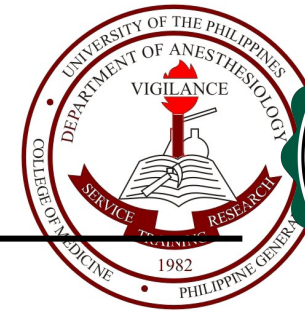
Major Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---|--|-------------------------|
| OB Anes__ | Applied Anatomy & Physiology in Critical Obstetric Anesthesia | <ul style="list-style-type: none">• This advanced level course combines theoretical knowledge with practical applications, emphasizing the anatomical structures and physiological processes essential to deliver safe and effective anesthesia care to high risk obstetric parturients• This course is designed to provide comprehensive knowledge and practical understanding of the anatomical and physiological principles relevant to the practice of high risk obstetric patients and critical obstetric emergencies and anesthesia care. | 2 (32 hours) |

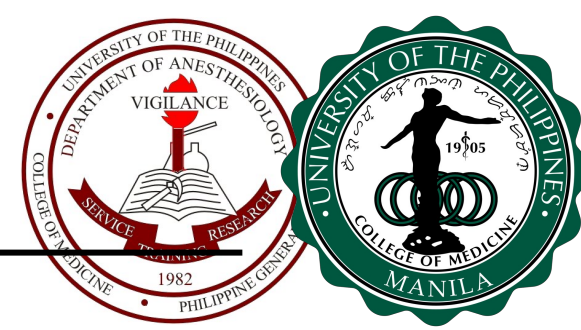


Major Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|--|---|-------------------------|
| OB Anes__ | Medical Therapeutics in High Risk Obstetric Anesthesia | <ul style="list-style-type: none">The course is a comprehensive exploration of advanced anesthesia techniques, pharmacology, and medical interventions necessary for managing high-risk obstetric patients undergoing complex obstetric and non-obstetric procedures with the ultimate goal of ensuring ensure the safety and well-being of both mother and fetus | 2 (32 hours) |

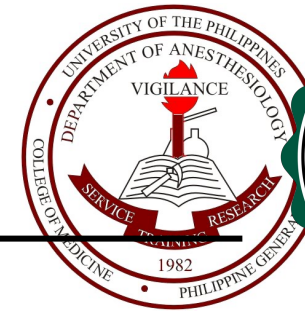
Major Courses



| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|--------------------------------------|--|-------------------------|
| OB Anes__ | Seminars in Obstetric Anesthesiology | <p>This is an advanced level course designed to provide the student with an opportunity to explore and critically analyze current topics from peer reviewed journals, research advancements, and emerging trends in the field of Obstetric anesthesiology</p> <p>This course aims to foster intellectual engagement, promote discussion, and enhance the students' ability to stay informed about the latest evidence-based developments in their respective subspecialty.</p> | 2 (32 hours) |



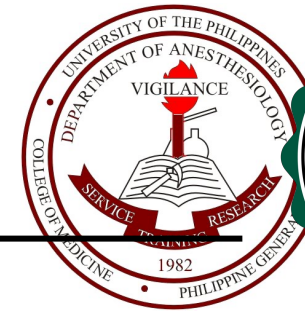
Major Courses



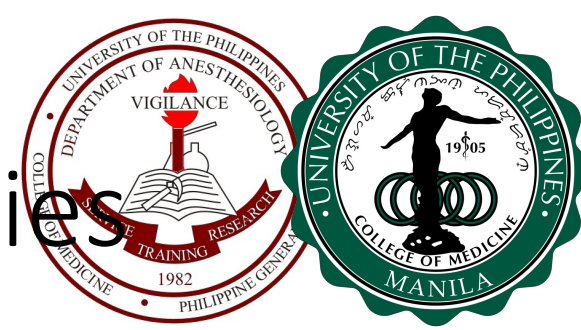
| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---------------------------------------|--|-------------------------|
| OB Anes__ | Clinical Correlates in Anesthesiology | <ul style="list-style-type: none">• This course is designed to bridge the gap between theoretical knowledge and its practical application in high risk obstetric clinical settings.• This course focuses on integrating the principles of obstetric anesthesiology with various peri-operative clinical scenarios of specific high risk disease states requiring anesthesia care including preoperative assessment and optimization, intraoperative monitoring and management, and postoperative care and pain management.• Ultimately, the student develops sound clinical reasoning and decision-making in anesthesiology and create safe and effective individualized anesthetic plans. | 2 (32 hours) |



Major Courses

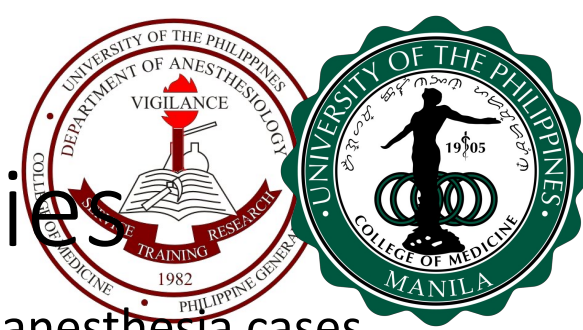


| Course Number | Course Title | Description | Units (Hours)/ Semester |
|---------------|---|---|-------------------------|
| OB Anes__ | Healthcare simulation in Obstetric Anesthesia | <ul style="list-style-type: none">• This course is designed to provide students with a basic understanding of the principles, techniques, and applications of simulation-based training in anesthesia education and practice.• It provides a dynamic and immersive learning experience designed to equip anesthesia providers with the skills and confidence needed to effectively manage critical incidents during obstetric anesthesia procedures.• Through realistic simulations of emergent obstetric scenarios, participants will develop rapid decision-making abilities, teamwork skills, and a comprehensive understanding of crisis management strategies. | 3 (48 hours) |



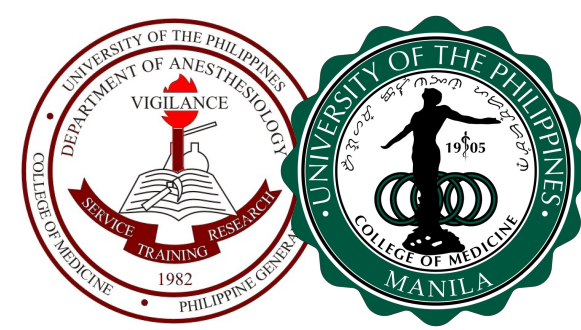
Teaching and Learning Strategies

- **Lectures and Didactic Sessions:** Didactic sessions may include presentations, case discussions, and interactive Q&A sessions.
- **Simulation-based Training:** Simulation exercises using low to high-fidelity mannequins or standardized patients
- **Debriefing Sessions:** After simulation exercises or real clinical experiences, debriefing sessions provide a safe space to reflect on actions, discuss what went well, identify areas for improvement, and enhance decision-making skills.
- **Team-Based Learning (TBL):** This strategy involves small groups of learners working on case scenarios or questions. It promotes teamwork, communication, and collective problem-solving.
- **Peri-operative Patient Rounds :** observing and participating in real-world high risk obstetric cases, learning to assess patients, and being exposed to various anesthesia techniques.



Teaching and Learning Strategies

- **Case-Based Learning:** Presenting real or hypothetical obstetric anesthesia cases engages learners in critical thinking. This method encourages them to apply their knowledge to solve complex clinical situations.
- **Problem-Based Learning (PBL):** Learners collaborate to analyze and solve obstetric anesthesia-related problems. PBL encourages self-directed learning and promotes critical thinking and problem-solving skills.
- **Journal Clubs:** Analyzing and discussing recent research articles related to obstetric anesthesia helps learners stay updated on the latest developments in the field and develop skills in evidence-based practice.
- **Online Learning Modules:** E-learning platforms offer the flexibility to access learning materials, videos, quizzes, and interactive modules at learners' convenience. These resources can support both theoretical and practical aspects of obstetric anesthesia training.
- **Clinical Preceptorship:** One-on-one mentorship with experienced obstetric anesthesiologists allows learners to receive personalized guidance, ask questions, and gain insights from seasoned professionals.



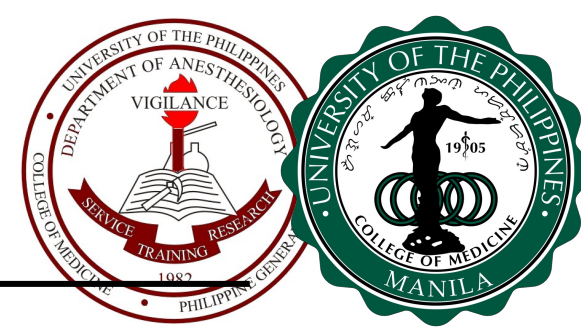
Assessment tools:

- **Written examinations** to evaluate theoretical knowledge of applied anatomy and physiology in critical obstetric anesthesia.
- **Practical assessments** involving simulation-based scenarios to test decision-making and clinical skills.
- **Case presentations** requiring the application of knowledge to complex obstetric cases.
- **Participation in group discussions** and interactive activities.
- **Self-assessment** exercises and reflective assignments.

Program Structure Master of Clinical Science in Anesthesiology (Obstetric Anesthesia)

| CORE COURSES | | MAJOR COURSES | | ELECTIVE COURSES | |
|--|-----------|---|---|---|---|
| CE 211: Fundamentals of Clinical Epidemiology | 2 | OB ANES 2__: Applied Anatomy & Physiology in Critical Obstetric Anesthesia | 2 | CE 201: Concepts of Clinical Economics and Health Social Sciences | 2 |
| CE 212: Basic Clinical Research Methodology | 2 | OB ANES 2__: Medical Therapeutics in High Risk Obstetric Anesthesia | 2 | CE 218: Ethics in Research | 1 |
| CS 221: Teaching Strategies in Clinical Medicine | 2 | OB ANES 2__: Seminars in Obstetric Anesthesiology | 2 | CE 224: Medical Writing and Presentation | 2 |
| CS 273: Introduction to Quality Improvement and Health Systems Management | 2 | OB ANES2__: Clinical Correlates in Anesthesiology | 2 | HP 201: Psycho-Philosophical Foundation of Teaching and Learning in Health Sciences | 2 |
| CS 298: Special Project | 3 | OB ANES 2__: Simulation in Obstetric Anesthesia | 3 | HP 223: Clinical Teaching and Evaluation of Clinical Competence | 2 |
| | | | | HI 201: Health Informatics | 3 |
| | | | | Med Anthro 221: Political Economy and Social Epidemiology | 3 |
| | | | | *May enroll in any other courses available in UP Manila upon the approval of the Course Adviser | |
| REQUIRED UNITS | 11 | 19 | | | |

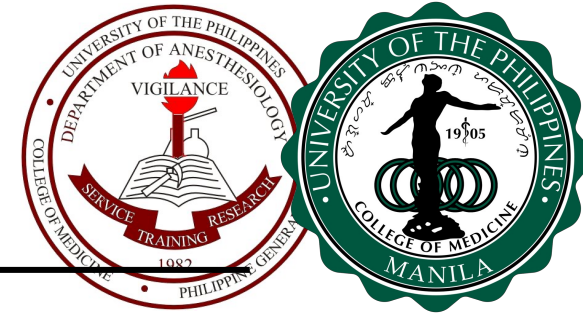
Program Structure



| | Second Semester AY1 (January to May) | First Semester, AY 1 (August to December) |
|---------------------|--|--|
| Third Year Resident | <p>CE 211: Fundamentals of Clinical Epidemiology</p> <p>CE212: Basic Clinical Research Methodology</p> | <p>CS 221: Teaching Strategies in Clinical Medicine</p> <p>CS 273: Introduction to Quality Improvement and Health Systems Management</p> <p>OB ANES 2__: Applied Anatomy & Physiology in Critical Obstetric Anesthesia (2 months)</p> <p>Or Elective: 2 units</p> |
| Total Units | Core: 4 units | Core 4 units Major 2 units or Elective 2 Units = 6units |



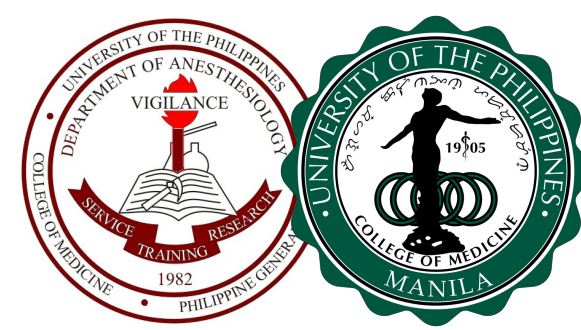
Program Structure



| | Second Semester AY2 (January to May) | First Semester, AY 2 (August to December) |
|------------------------------|---|---|
| Fellowship Year 1 | <p>OB ANES 2__: Medical Therapeutics in High Risk Obstetric Anesthesia (2 units)</p> <p>OB ANES 2__: Seminars in Obstetric Anesthesiology (2 units)</p> <p>Elective 2 units</p> <p>Elective 2 units</p> | <p>OB ANES2__: Clinical Correlates in Anesthesiology (2 units)</p> <p>OB ANES 2__: Simulation in Obstetric Anesthesia (3 units)</p> <p>Elective 2 units</p> <p>Elective 2 units</p> |
| | Core: Special Project 3 units (whole year) | |
| Total Units | Major: 4 Elective 4 = 8 units | Major 5 , Elective 4 , Core 3; = 12 units |



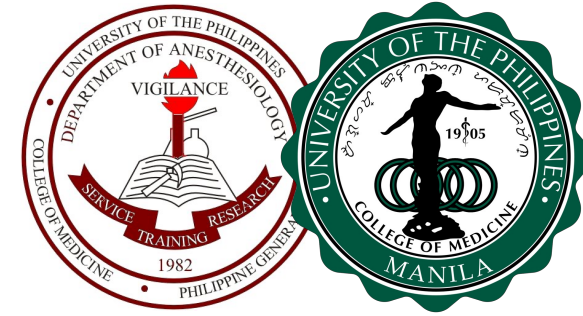
Program Requirements: Admission



- Acceptance into the Obstetric Anesthesia fellowship training program
- Recommendation letter by the Department Chair
- Duly accomplished Application Form (available at the Graduate Office or through the ngohs.upm.edu.ph) together with the supporting documents



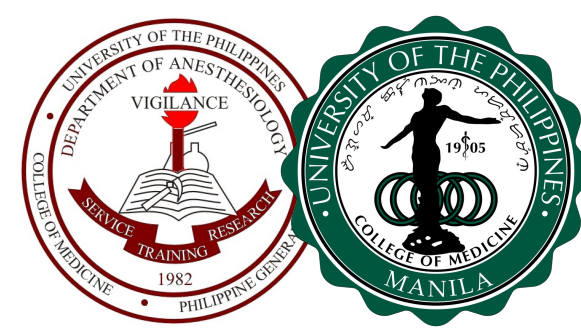
Program Requirements: Retention



- General weighted average (GWA) of 2.00 or better for the master's degree courses
- No grade of 5.00 in any academic course.
- A fellow in training who fails to maintain the GWA of 2.0 or better may be dropped from the MCS program but may continue the fellowship training program
- A maximum of 5 years is given to the resident to finish the program



Program Requirements: Graduation



- Graduation from the MCS is independent of graduation from the Obstetric Anesthesia Fellowship Training Program
- A candidate for the degree of Master of Clinical Sciences in Anesthesiology (Obstetric Anesthesia) must comply with the rules on graduation of the University.
- Completion of the fellowship training program
- Completion of 24 academic units
- General weighted average not lower than 2.00 in major courses
- Completion of the Special Project, a publication ready output which must be original and constitutes a substantial contribution to the field of obstetric anesthesiology in the Philippines