



Department of Physician Assistant Education
Masters of Science in Medicine

MSM 6600 S Elective Neurosurgery

2025

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PLNU MISSION

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION

This 5-week, full-time, surgical elective experience builds upon foundational surgical medicine skills acquired in the core surgery rotation, challenging students to integrate clinical reasoning and apply medical knowledge across the continuum of surgical care, including outpatient evaluation, per- and post-operative management, and intraoperative participation. Students will interpret and integrate diagnostic data within the context of neurosurgical pathology and demonstrate appropriate documentation that reflects neurosurgical assessment and management plans. Clinical schedules will mirror the preceptor's, including nights, weekends, and holidays.

COURSE GOALS

The goal of the 5-week elective surgical rotation is to:

1. Place students at sites that will give them the opportunity to continue to build upon and apply medical knowledge of surgical principles and techniques of common neurosurgical conditions.
2. Demonstrate clinical reasoning to evaluate and manage neurosurgical patients across the perioperative continuum to decrease morbidity and mortality in the neurosurgical setting.
3. Collaborate within interdisciplinary neurosurgical teams to optimize patient safety, surgical outcomes, and continuity of care.

PROGRAM LEARNING OUTCOMES

The content in this course will contribute to the student's competency in this/these area(s):

- PLO 1. Gather a history and perform a physical examination. ^{PC, KP, ICS, P, PPD}
- PLO 2. Prioritize a differential diagnosis following a clinical encounter. ^{PC, KP, PBLI, ICS, PPD}
- PLO 3. Recommend and interpret common diagnostic and screening tests. ^{PC, KP, PBLI, SBP, PPD}
- PLO 4. Enter and discuss orders and prescriptions. ^{PC, PBLI, ICS, SBP, PPD}
- PLO 5. Document a clinical encounter in the patient record. ^{PC, ICS, P, SBP, PPD}
- PLO 6. Provide an oral presentation of a clinical encounter. ^{PC, PBLI, ICS, P, PPD}
- PLO 7. Form clinical questions and retrieve evidence to advance patient care. ^{KP, PBLI, ICS, P, PPD}
- PLO 8. Give or receive a patient handover to transition care responsibilities. ^{PC, PBLI, ICS, P, PPD}
- PLO 9. Collaborate as a member of an inter-professional team. ^{ICS, P, SBP, IPC, PPD}
- PLO 11. Obtain informed consent for tests and/or procedures. ^{PC, ICS, SBP, PPD}

Initials indicate PA core competency domains required to meet the PLO.

PA Core Competency Domains: Patient Care (PC), Knowledge for Practice (KP), Practice-based Learning and Improvement (PBLI), Interpersonal and Communication Skills (ICS), Professionalism (P), Systems-Based Practice (SBP), Interprofessional Collaboration (IC), Personal and Professional Development (PPD)

COURSE LEARNING OUTCOMES

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| CLO 1. Gather and prioritize relevant clinical history and physical exam findings across the perioperative continuum in a neurosurgery patient. |
| CLO 2. Synthesize and prioritize a differential diagnosis based on pre- and post-operative clinical findings in a neurosurgery patient. |
| CLO 3. Select and justify appropriate diagnostic, laboratory, pathology, and screening studies for neurosurgical patients. |
| CLO 4. Interpret diagnostic and laboratory data to guide perioperative clinical decision-making in a |

neurosurgical patient.
CLO 5. Develop and justify appropriate management plans for neurosurgical patients based on clinical reasoning.
CLO 6. Justify pharmacologic decisions in the perioperative period in a neurosurgical patient.
CLO 7. Demonstrate foundational knowledge to evaluate and manage common general neurosurgical conditions.
CLO 8. Provide a concise and organized oral presentation of a neurosurgical clinical encounter.
CLO 9. Document clinical encounters clearly, accurately, and thoroughly in the medical record appropriate to a neurosurgical setting.
CLO 10. Educate patients and families to obtain informed consent in the neurosurgical setting.
CLO 11. Collaborate effectively with members of the interprofessional team during neurosurgical care, including intraoperative communication and transitions of care.
CLO 12. Form clinical questions and use evidence-based resources to enhance neurosurgical care and support continuous learning.
CLO 13. Reflect on clinical performance by identifying strengths and areas for improvement, and incorporate feedback into future practice.
CLO 14. Demonstrate professionalism through accountability, integrity, punctuality, and adherence to ethical and legal standards in the neurosurgical setting.

INSTRUCTIONAL OBJECTIVES

The following are the required learning objectives for the Elective NeuroSurgical rotation. By the conclusion of the rotation, students are expected to demonstrate the objectives outlined below at the required level of competency. Refer to Canvas for detailed rubric criteria.

IO 1a. Filter and prioritize historical information for a neurosurgical patient in the pre-op setting.
IO 1b. Filter and prioritize historical information for a neurosurgical patient in the post-op setting.
IO 2a. Perform a clinically relevant physical exam on a neurosurgical patient in the pre-op setting.
IO 2b. Perform a clinically relevant physical exam on a neurosurgical patient in the post-op setting.
IO 3. Synthesize the pertinent subjective and objective findings to prioritize a differential diagnosis.
IO 4a. Justify the labs, diagnostics, pathology, and screening studies ordered for evaluating the patient in the pre-operative neurosurgical setting based on the differential diagnosis.
IO 4a. Justify the labs, diagnostics, pathology, and screening studies ordered for evaluating the patient in the post-operative neurosurgical setting based on the differential diagnosis.
IO 5a. Integrate labs, diagnostics, pathology, and screening data into clinical decision-making in the pre-operative neurosurgical setting.
IO 5b. Integrate labs, diagnostics, pathology, and screening data into clinical decision-making in the post-operative neurosurgical setting.

IO 6. Justify an appropriate management plan for a neurosurgical patient based on the well-reasoned differential and lead diagnosis.
IO 7a. Justify the selection or holding of pharmacological agents pre-operatively for a neurosurgical patient.
IO 7b. Justify the selection or holding of pharmacological agents post-operatively for a neurosurgical patient.
IO 8. Demonstrate broad fundamental medical knowledge regarding common neurosurgical conditions.**
IO 9. Synthesize and prioritize information to provide a concise and well-organized oral presentation of the clinical encounter appropriate to a neurosurgical setting.
IO 10. Educate patients and families about the risks, benefits, and alternatives of neurosurgery.
IO 11. Written documentation is clear, accurate, organized, thorough, and appropriate to the neurosurgical setting
IO 12. Engages with other healthcare team members to coordinate care in the neurosurgical intraoperative setting.
IO 13. Obtain, analyze, and use the medical literature and other peer-reviewed resources to address medical questions and to sustain professional growth.
IO 14. Analyze strengths and weaknesses in medical knowledge based on self-evaluation.
IO 15. Solicits, accepts, and acts on feedback to make effective improvements.
IO 16. Demonstrates appropriate respect, honesty, integrity, adherence to ethical standards of behavior, and legal standards.
IO 17. Demonstrates accountability through timeliness and attends events as scheduled; meets all deadlines; dependable; punctual; communicates promptly when delayed.
IO 18. Readily assumes responsibility. Works well with the team; is self-motivated.

**** ALIGNMENT OF ORGAN SYSTEM-BASED CONDITIONS:**

You are expected to demonstrate broad fundamental medical knowledge at the required level of competency, for the topics outlined in the [PAEA END OF ROTATION TOPIC LIST: GENERAL SURGERY; Neurology Section](#). Rubric criteria are available in Canvas and are assessed in the EOR exam. You are responsible for this content even if you do not encounter all listed conditions during your clinical rotation.

Assessment Map

RECOMMENDED STUDY RESOURCES

Note: Although there are no required textbooks for these rotations, students are encouraged to use textbooks and resources that are pertinent to the discipline of their study. The titles below are recommendations provided through Access Medicine.

****Title: Current Diagnosis & Treatment: Surgery, 14th Edition**

Author: Gerald M. Doherty

Publisher: McGraw – Hill

ISBN 978-0-07-179211-0

ISSN: 0894-227

****Title: Clinician's Pocket Reference**

Author: Leonard Gomella MD, FACS

Publisher: McGraw-Hill

ISBN: 978-00711602822

Recommended downloads for handheld devices:

- Epocrates
- Medscape
- PubSearch
- Medical Calc

NOTE: Individual preceptors may include other resources. You will be notified of these resources by each preceptor. *If your preceptor does not offer additional resources, ask them what resources they like to use.*

ROTATION EVALUATION PROCESS

Rotation assessment grades are based on the Clinical Competency Modules listed below.

A. Rotation and Callback activities	25%
B. History and Physical Written Assignment	25%
C. End of Rotation Written/MCQ Examination	25%
D. Clinical Performance Evaluation	25%

Each Clinical Competency Module comprises 25% of the final course grade and is evaluated on a pass/fail basis.

All grades are determined using a competency-based rubric with defined levels of performance: Novice, Advanced Beginner, Competent, and Proficient. Refer to Canvas for detailed rubric criteria.

A pass (25%) is defined as completing all module components at a level of Competent or above.

Failure to meet the level of Competent or above in any content area will result in Primary Remediation. If the Primary Remediation outcome meets the Competent level or higher as specified in the rubric, the student will receive a pass.

An unsuccessful Primary Remediation will result in a secondary remediation. While the secondary remediation must demonstrate competency, no credit (0%) will be awarded for the module.

If a student is unable to demonstrate competency after the secondary remediation, the student will be subject to SPPC referral, which may result in course failure or dismissal.

Faculty will define and document remediation outcomes within Canvas.

Given the unique structure of the clinical year, remediation for the identified deficiency may take place **within 24 hours**.

For further details on course remediation, please refer to the *PLNU PA Program Student Handbook* and the *PLNU Clinical Manual*.

A. Rotation and Callback Activities:

- a. Rotation activities include instructional and assessment activities.
(Refer to Canvas for further details of the specific rotation activities)
- b. Callback activities include the **Transition to Practice (TTP)/Capstone** curriculum and **Grand Rounds**.
(Refer to Canvas for specific details, schedules, and requirements)

Professionalism Expectation:

Incomplete or missed assignments and/or failure to attend Callback activities are considered a professionalism concern and will trigger a Professionalism Violation as outlined in the PLNU PA Student Handbook.

Failure to meet professionalism standards initiates the following 4-step process (Handbook, p. 24):

1. Verbal warning (documented)
2. Written warning (referred to SPPC and documented)
3. Final written warning and SPPC appearance
4. Dismissal from the program

B. History and Physical Written Assignment

At the end of each elective clinical rotation, students are required to submit a complete written History and Physical. This written assignment is one of the tools used to assess how well the PA student gathers, synthesizes, and documents the important information necessary to care for the patient. The assignment is graded as pass/fail. If the H and P is not written at a competent level for a PA student, they will meet with the DCE or designee to create a plan for addressing areas of deficiency.

C. End of Rotation Examination:

This comprehensive written assessment is used to determine if the student has obtained the medical knowledge consistent with the instructional objectives.

D. Clinical Performance:

This pass/fail assessment reflects and integrates the students' performance at the clinical site through multiple forms of communication and data gathering, including but not limited to the Preceptor Evaluation Form, Faculty Communication with the Clinical Site, Student Progress and Feedback, and the Mid Rotation Preceptor Evaluation Form:

- The clinical year is divided into three grading blocks: **Block A (Rotations 1-3), Block B (Rotations 4-6), and Block C (Rotations 7-9)**. Student performance will be assessed using a competency-based rubric specific to each block with defined levels of performance: Novice, Advanced Beginner, Competent, and Proficient.

Grading Progression:

The expectations for clinical performance on the **preceptor evaluation** will increase across Blocks A, B and C to reflect the student's growth in knowledge, skills, and professionalism.

Pass/Fail Requirements: As defined below, students must achieve a >70% Competent for each rotation in Block A, >85% Competent in each rotation for Block B, and 100% Competent in each rotation for Block C to successfully complete the clinical year.

A "Novice" level in any category, in any rotation, will result in failure of the clinical evaluation and referral to SPPC. The grading progression for each block is reflected below:

Block A (Rotation 1-3)	70% of all preceptor evaluation components must be at the Competent level or higher.
Block B (Rotation 4-6)	85% of all preceptor evaluation components must be at the Competent level or higher.
Block C (Rotation 7-9)	100% of all preceptor evaluation components must be at the Competent or higher level.

- **Faculty Communication with Clinical Site:** Faculty engage in ongoing dialogue with the clinical site, including the preceptor, to gather qualitative and contextual insights about the student's performance.
- **Student Progress and Feedback:** Discussions with the student about their clinical experiences and any relevant documentation provided to the faculty.

- **Mid Rotation Preceptor Evaluation Form:** Students must complete a Mid-Rotation Preceptor Evaluation with the preceptor most familiar with their performance to receive constructive, actionable feedback, identify areas for improvement, and make necessary adjustments before the End-of-Rotation Evaluation. *Refer to the Canvas Course for specific details.*

Student Evaluation/Tasks

The following Student Evaluation Tasks are mandatory and will be graded on a complete/incomplete basis.

This task is to be completed on Canvas within 3 days of the start of the rotation.

- Safety Check-in #1

These tasks are completed on Exxat:

- Electronic entries of timesheets
- Electronic entries of patient encounters
- Course surveys, including but not limited to:
 - Safety check-in #2
 - Mid-rotation Reflection
 - Mid-rotation Preceptor Evaluation
 - Student evaluation of site and preceptor.

Failure to submit these tasks by the specified deadlines is considered a professionalism concern and will trigger a Professionalism Violation as outlined in the PLNU PA Student Handbook. For further details, schedules, and specific requirements, refer to the Canvas course materials.

Faculty retain the authority to issue a failing grade for the rotation if the student:

- Demonstrates “novice” evaluation for professionalism
- Has excessive excused absences or unexcused absences from the rotation site

Exceptions or extensions will only be granted under documented extenuating circumstances and at the sole discretion of the faculty. *Refer to the PLNU Clinical Manual for specific details.*

Final Course Grade

The Final Course Grade will be in keeping with Point Loma Nazarene University policy for graduate programs and grading will be as follows:

A = 93-100	C =73-76
A-= 92-90	C-=70-72
B+= 87-89	D+=67-69
B = 83-86	D= 63-66
B-= 80-82	D-=60-62
C+=77-79	F= 0-59

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. For all student appeals, faculty and students should follow the procedures outlined in the University Catalog. See [Graduate Academic and General Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

ARTIFICIAL INTELLIGENCE (AI) POLICY

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, Grammarly, Perplexity, etc.) in this course. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. Please use the following sources to guide your citations when using AI.

[MLA Style Center: Citing Generative AI](#)

[APA Style: How To Cite ChatGPT](#)

[Chicago Manual of Style: Citing Content Developed or Generated by AI](#)

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU ACADEMIC ACCOMMODATIONS POLICY PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center and satellite offices at Balboa and Mission Valley Campuses (EAC@pointloma.edu or 619-849-2533). Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. Professors are able to view a student's approved accommodations through Accommodate on the Onelogin page. PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course.

Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes. Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodations.

STUDENTS WITH ACCOMMODATIONS AND CLINICAL ROTATIONS

Students enrolled in the Physician Assistant (PA) program who are also registered with the Educational Access Center (EAC) for a prior disability diagnosis, and who require accommodations for clinical rotations, must submit their requests in writing no later than 6 months prior to the start of the clinical year. This advance notice is necessary due to the complex nature of clinical rotation placements, which involve coordination with external entities, adherence to program standards, and compliance with patient safety protocols. If your request is less than 6 months in advance, appropriate placement is not guaranteed, so you may need to extend your time in the program. If you become disabled during your PA program, cases will be evaluated on an individual basis.

Requests for accommodations must first go through the EAC process to secure appropriate documentation from a qualified professional provider detailing the specific accommodations recommended. The EAC meets with the student and determines which accommodation(s) apply to the PA program. The program reserves the right to review each request with the EAC on its individual merits to ensure that the requested accommodations do not create a fundamental alteration in the nature of the clinical curriculum or compromise patient safety, per the Americans with Disabilities Act (ADA).

Students are advised that accommodations may not be guaranteed at external clinical rotation sites, as these sites operate independently and may have their own policies regarding accommodations. The PA program, with assistance from EAC, will attempt to find an appropriate placement. The advanced notice of 6 months allows our placement staff to explore options that match accommodation requirements. Failure to submit accommodation requests within the specified

timeframe, or to communicate with rotation sites regarding accommodations in a timely manner, may result in the inability to implement accommodations for the clinical rotation period, as the program cannot guarantee the feasibility of last-minute adjustments to clinical schedules or placements.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements.

If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an “F” grade.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements.

Refer to [Academic Policies](#) for additional detail.

Please note that PA Department attendance policy supercedes the University attendance policy.

LANGUAGE AND BELONGING

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of the religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality. If you (or someone you know) have experienced other forms of discrimination, you can find more information on reporting and resources at www.pointloma.edu/nondiscrimination.

SPIRITUAL CARE AND CHAPLAIN SERVICES

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our Graduate and Adult Undergraduate students to encounter God and grow in their Christian faith. We have onsite chaplains at our different campuses who may be available during class break times across the week. At the Balboa campus, we have an onsite chaplain, Rev. Kevin Portillo, who is available during class break times across the week. If you have questions, a desire to meet or share any prayer requests with Rev. Portillo, you may contact him directly at KevinPortillo@pointloma.edu. Rev. Portillo's cell number is 760-594.4957 if you need a more immediate response. If you have questions or a desire to meet or share any prayer requests with our chaplains, you can also find them at the [Chaplain's Page](#) via [myPLNU](#). In addition, the Mission Valley and Balboa campuses have a prayer chapel for use as a space set apart for quiet reflection and prayer.

This syllabus is subject to change. Students are encouraged to check course messages and emails in order to remain current.

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