



Course Title

The Clinical Genetics and Genetic Testing Course

Course Description

This course provides nurse practitioners with a practical foundation in clinical genetics and genomics, covering inheritance patterns, variant interpretation, genetic screening, and risk assessment across a range of conditions encountered in clinical practice. Participants will gain skills in managing genetic test results, applying genetic counseling principles, and integrating guideline-based genetic decision-making — including when to test, when to refer, and how findings influence patient management. The course also addresses practical considerations for incorporating genetic services into clinical practice, with a consistent focus on patient-centered, ethically grounded care.

Course Outcomes

By the conclusion of this module, the student should be able to:

- Evaluate the legal and ethical frameworks governing clinical genetic testing, including patient rights, privacy protections, and regulatory compliance.
- Explain core principles of clinical genetics, including inheritance patterns, variant classification, and genotype–phenotype relationships.
- Construct a comprehensive pedigree and interpret family history data to assess inherited disease risk in patients.
- Compare available genetic testing laboratory options and service models to determine appropriate clinical integration strategies for practice.
- Design a genetic screening visit that incorporates informed consent, accurate documentation, and structured follow-up protocols.
- Apply guideline-based criteria to identify, screen, and manage patients at risk for hereditary cancer syndromes.
- Interpret genetic screening findings related to cardiovascular disease and lipid disorders to guide clinical decision-making.
- Identify genetic contributors to renal disease and nephrolithiasis and their implications for patient evaluation and management.
- Explain the clinical relevance of selected metabolic and epigenetic-related gene variants (e.g., MTHFR, COMT, CBS) and their impact on patient care.
- Interpret pharmacogenomic data to inform individualized drug selection and dosing decisions.
- Produce accurate clinical documentation and charting that reflects genetic evaluation findings and supports continuity of care.
- Analyze insurance coverage criteria and billing models applicable to genetic testing services in clinical practice.
- Formulate a plan for integrating genetic services into clinical practice, incorporating risk management, pricing structures, malpractice considerations, and ethical marketing standards.



Contact hours awarded: 7 total hours

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If any course faculty have a financial relationship to disclose, they will be listed below. All relevant financial relationships, when present, have been mitigated.

- N/A



Course Completion

Students of The Elite Nurse Practitioner Courses must pay the associated course fee to obtain the educational credit. To receive credit for this educational activity, students must:

1. Read the course material in its entirety, including the additional resources section of the course.
2. Complete the post-course quiz.
3. Complete the mandatory course evaluation after you finish this educational activity.

Once the above requirements have been fulfilled, the Certificate of Completion can be downloaded and printed to show you have completed the course requirements and thus have earned the associated continuing education credits.

Contact Information

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