Program Description
This unique on-line program incorporates concepts from sciences and best practices in clinical dialysis to provide graduates with specialized, advanced knowledge in Nephrology Nursing. The Nephrology Nursing Program is intended to augment existing methods of in-house dialysis unit clinical training or community dialysis patient care orientation. Georgian College’s Nephrology Nursing Program will provide the health care system across Canada with a graduate who has met a rigorous standard of practice in clinical skills to service a growing population of patients and their families coping with End Stage Renal Disease.

Profile of the Graduate
The Georgian College Nephrology Nursing Program graduate will have reliably demonstrated the ability to integrate knowledge specific to Nephrology nursing with applied sciences and an understanding of current issues and legislation to provide care for renal patients in a variety of settings. The graduate will demonstrate knowledge, skills and attitudes that support the patient throughout the continuum of renal disease.

Career Opportunities
Graduates of the program will be qualified to work within the clinical scope of practice in dialysis units, independent health care facilities, and community care agencies where forms of dialysis and other supportive modalities of care are delivered.

Professional Affiliations
The graduate’s practice will fall under the Regulated Health Professions Act (1995) that controls designated acts which access the patient’s bloodstream in extracorporeal circulation. Additionally, clinical practice falls under the professional guidelines of the College of Nurses of Ontario and currency in registration is expected. Graduates of the program are encouraged to affiliate themselves with the Canadian Association of Nephrology Nurses and Technologists. Upon completion of the program, graduates are encouraged to apply for certification through the Canadian Nurses Association for specialisation in Nephrology. The national nursing competencies for Nephrology have been developed by the Competency Development Committee, reviewed extensively by expert nephrology nurses, and approved by the Examination Committee. The competencies can be accessed and downloaded via the CNA website.
Program Learning Outcomes
Upon completion of the program of studies specialising in Nephrology/Dialysis Nursing, the graduate will:

1. Apply knowledge from dialysis core courses and sciences to understand the patient’s health and interventions that will enhance treatment outcomes
2. Demonstrate familiarity with clinical procedures and use of the technology to positively influence outcomes for the patient with renal problems
3. Show evidence of critical thinking, problem solving and priority setting to intervene in clinical situations with the renal patient
4. Utilize advanced communication and team skills to interact with the patient, family and other renal health team members in a multi-disciplinary setting
5. Demonstrate professionalism, ethical practice and cultural sensitivity in diverse clinical settings
6. Function in accordance with the current standards of clinical practice as set by each provincial College of Nurses, the Regulated Health Professions Act and the Canadian Association of Nephrology Nurses and Technologists.

Admission Requirements
Applicants must have proof of registration as a Registered Nurse.
Graduate nurses from an approved diploma/university nursing program who are eligible for registration may apply.
Applicants must meet College entrance requirements ie., TOEFL scores, transcripts etc.
Applicants must be prepared to submit correspondence and assignments in English.

Special Needs
Once a student is admitted to a Georgian College program, every effort is made to accommodate individual learning needs. In order to receive assistance, students are encouraged to contact the College’s Special Needs Co-ordinator in the Student Services Department.

Alternative Delivery
The Nephrology Nursing program will utilize flexible scheduling which is sensitive to the needs of practising nurses.

Program Summary

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Total Basic Program hours - 274

Optional Self Study - 26 hrs  Paediatric Dialysis and Transplantation Procedures
Course Code TBA
Total Program hours – 300

The Canadian Nurses Association certification eligibility criteria recognizes a post basic nursing program in this specialty and demonstrating successful completion of 300 hours of instruction in Nephrology Nursing will reduce by half the minimum experience required to write the certification exam. This means that as an RN working in dialysis, one would require 3,900 hours of experience over three years. With the Nephrology Nursing Certificate, this is reduced to 1,950 hours.

Course Descriptions:

RNRS 1008 Renal Anatomy/Physiology and Pathology (36 hours) will cover the processes across membranes and will review of regulation of fluid and electrolyte balance and acid base balance in normal kidney functioning. The course will also discuss the classifications and causes of acute and chronic renal failure. Diagnostic procedures and findings in renal disease will also be covered.

RNRS 1009 Continuum of Care (42 hours) will discuss the phases of illness from pre-dialysis assessment and conservative care to deterioration to chronic renal failure and further long term and palliative care. Finally, the decision to withdraw from treatment as an option will be discussed along with the significant psycho-social implications for family, patient and staff. The development of acute renal failure will be discussed in terms of its causes, symptoms and recovery. Continuous Renal Replacement therapies will be discussed in detail.

RNRS 1010 Renal Pharmacology (18 hours) will detail the pharmacokinetics and pharmacodynamics of drugs and how these are significantly different in the renal patient. Patient drug profiles will be used as examples. The problem of polypharmacy and use of drugs in special populations of ESRD patients will be discussed.

RNRS 1011 Therapeutic Renal Nutrition (15 hours) will review fluid and electrolyte balance, measures to minimize protein catabolism and to promote optimal intake, especially in children. Vitamin supplementation, specialized diets (diabetic, etc.) and patient education related to therapeutic renal nutrition will be discussed with sample diets being analysed for their adequacy.

RNRS 1012 Treatment Modalities I (40 hours) will cover peritoneal dialysis and renal transplantation. The coverage of peritoneal dialysis will include the anatomy and physiology of the peritoneal membrane, its permeability and solute removal and transport mechanisms. Patient selection criteria and contraindications will also be noted. The types of PD access, methods of insertion, care of the access and access complications will be included. Additionally, the elements of the PD prescription (composition of the PD solution, number and volume of exchanges, timing of exchanges and delivery system) will be included. Patient care, documentation, complications or treatment and measures of treatment adequacy will be noted. Principles of commonly occurring infections, patient assessment and treatment will be covered. Use of infection control strategies will be stressed.
The coverage of transplantation will include the initial work up, donor selection and recipient matching with both living related and cadaveric donors. Patient care in the pre and post-operative periods will be covered in include the immune reaction, immunosuppressive therapy and host and long term complications. The psychological adjustment for patient and family will be a point of focus.

RNRS 1013 Treatment Modalities II (45 hours) will discuss hemodialysis treatment, complications of hemodialysis. The principles related to solute and fluid removal, measures of clearance and determination of adequacy will be discussed. The components of the hemodialysis system will be covered, including the dialyser, the blood circuit, the dialysate solution, heparin pump, ultrafiltration controller and variable sodium options. Methods of preparing dialysis quality water for dialysate will be discussed. Vascular access, both temporary and permanent will be covered along with access care and trouble-shooting. The complications of dialysis will be an important point of focus.

RNRS 1014 Professional Practice Standards and Medical Ethics: (18 hours) Professional Practice Standards will cover the latest practice standards for Nephrology Nursing, as developed by CANNT, and professional bodies affiliated with renal patient care. The need for ongoing education (CEUs) and the process of certification through CNA for the designation of C.Neph.(C) will be discussed and promoted. The course will also highlight the need for original nursing research which will contribute to the body of clinical knowledge in renal patient care. It will include, but not be limited to; securing research funding, collaboration with research experts, team members and subjects, designing and doing the study, documenting the results and publishing the study. Additionally, this course will discuss the standards for agency accreditation as they apply to renal patients. Quality Improvement standards will be discussed as they related to practice and accreditation standards.

The Medical Ethics portion of this course will cover the normative ethics and approaches to solving ethical dilemmas. Elements of ethics, patient rights, informed consent and confidentiality will be covered. In addition, Durable Power of Attorney, Substitute Decision-Maker, the “Living Will” will all be discussed and the nurse’s responsibilities will be covered. The Ethical Guidelines from College of Nurses will be covered in a case study format with real cases being brought from the workplace as a point of focus.

RNRS 1015 Renal Client & Family Education (12 hours) will be a practice oriented course where principles of teaching and learning are demonstrated by the student. Topics such as the characteristics of the adult learner, factors that influence learning, and methods to motivate and evaluate learning will be discussed prior to students doing teaching demonstrations. Materials developed will be able to be used in the work setting and will be shared among the group.

RNRS 1016 The Health Care System (12 hours) will address the structure of the health care system and how funding decisions are made related to health care. Legislation will be discussed as it relates to policy setting. Students will examine how health care priorities are established and funded at the provincial and local levels.

RNRS 1017 Practicum (36 hours) will consist of a preceptored clinical experience in a
hospital dialysis unit or community care setting. Haemodialysis equipment will be utilized, under supervision of hospital staff, to demonstrate the principles of operation, common alarms and basic troubleshooting. Water treatment system testing pre treatment and use of analysers to assess equipment reliability and patient parameters will also be discussed. The student will complete a variety of observational experiences and an assignment designed to integrate previously learned theory to a clinical practice setting.

Optional Self-Study in Paediatric Dialysis & Transplantation (26 hours)  Course Code to be determined

This course will cover the wide diversity of treatments available for paediatric patients with Chronic Renal Failure (CRF). Concepts will include the indications for dialysis (HD and PD as well as home/nocturnal dialysis), the decision making that determines the choice of modality, and the complications of each therapy that are unique to the paediatric patient – access problems, malnutrition, hypertension, anaemia, growth suppression, anticoagulation issues and renal osteodystrophy. Measures of dialysis adequacy will be studied. Several points of focus will include: nutrition, renal education and normal growth and development. The psychosocial adjustment of the patient and their family will be covered.

Transplantation in the paediatric patient will also be studied and will include transplant criteria, initial work up, donor selection and recipient matching with both living related and cadaveric donors. Patient care in the pre and post-operative periods will be studied and will include the immune reaction, immuno-suppressive therapy and host and long term complications. The psychological adjustment for patient and family will be a point of focus.

Evaluation:
All courses require a 60% for successful completion, with an overall 70% for entitlement to the certificate. Evaluation will be based on a wide variety of summative methods including, but not limited to, pencil and paper tests, papers and presentations. Evaluation will be discussed with students in the first week of each course.