



**DELIVERING  
QUALITY EDUCATION  
SINCE 1985  
IN  
ALL ULTRASOUND MODALITIES**

**HOME STUDY COURSES  
FOR**

**CONTINUING  
EDUCATION**

**REGISTRY  
PREPARATION**

**CROSS  
TRAINING**

**CREDITS ACCEPTED BY:  
ARDMS, ASRT, ARRT, CCI, FLORIDA RT'S,  
SONOGRAPHY CANADA, SVU**

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**Dear Colleague:**

**The Burwin Institute has been offering quality home study courses since 1985. The courses are very comprehensive and cover the topics in great detail.**

**Many successful Sonographers use the Burwin courses as their only means of preparation for the Registry Credentialing Examinations.**

**Each course includes *SEVERAL HUNDRED QUESTIONS* to test your knowledge as you progress with the course. The course ends with a *MOCK EXAMINATION THAT SIMULATES THE REGISTRY CREDENTIALING EXAMINATION* and helps to build your confidence.**

**Many people writing examinations worry about them a great deal. Burwin courses can *TAKE THE WORRY OUT OF EXAMINATIONS*. Remember Burwin courses are written by sonographers for sonographers. They are easy to understand and apply both on the job and at examination time.**

**Most people who take a Burwin course sign up for another one. This is because they feel the *COURSES GIVE GREAT VALUE FOR THEIR MONEY* and enable them to pass examinations and become better sonographers.**

***STOP WORRYING ABOUT THE REGISTRY.  
THE BURWIN COURSES WILL HELP YOU TO PASS.***

**Yours sincerely,**

**Merle McCann**  
BA, RT(R), AC(R), RDMS, RDCS  
CRGS, CRCS  
**Registrar**

***PS: REGISTER TODAY ONLINE AT [WWW.BURWIN.COM](http://WWW.BURWIN.COM).***



**THE BURWIN INSTITUTE** was established in 1984 to provide **QUALITY HOME STUDY COURSES** in diagnostic ultrasound applications. Burwin courses provide, in a structured fashion, the means of learning the ultrasound theory needed to challenge the Registry Credentialing Examinations. It is recognized that various institutions offer short courses and seminars for Registry preparation but many do not have the time or finances to attend these types of programs. **HOME STUDY COURSES ARE A PROVEN AND EFFECTIVE METHOD OF LEARNING.**

**BURWIN COURSES** are comprehensive and current. As such, they are an excellent way of obtaining CME/CEU/CPD credits for Registry maintenance. Courses are approved for Continuing Medical Education credits by either the Society of Diagnostic Medical Sonography or the American Society of Radiological Technologists and accepted by ARDMS, SONOGRAPHY CANADA, SVU, CCI and the ARRT.

**BURWIN COURSES CAN BE STARTED AT ANYTIME.** An assignment and examination schedule is provided with each course. Students complete the assignments according to schedule dates. **MOST STUDENTS COMPLETE THEIR ASSIGNMENTS ONLINE.** Assignments may also be submitted by FAX or sent by first class mail, special delivery or courier service. Mailing or communication costs by students to Burwin instructors are the responsibility of students.

Students are provided with comprehensive notes which include diagrams, references, exercises, and assignments. Some courses also have a comprehensive image atlas and/or case studies. Textbooks are not required.

**FEEDBACK ON STUDENT LEARNING** is based on a series of assignments which the student sends to the course instructor at regular, scheduled intervals. Assignments consist of multiple-choice

and true or false questions. Assignments submitted by FAX or mail are marked and returned to students by regular mail with an answer key and short explanations of the answers. Online assignments are automatically marked and, if successfully completed, the student is provided automatically with the assignment answers and explanations. Instructors respond in writing to student questions which are emailed, faxed or mailed to their instructor.

**EACH ASSIGNMENT** has a specific point value towards the final course grade. In every course, assignments have a total value of 30% towards the final course grade. Students must obtain a 75% pass mark on each assignment to receive the CME/CEU/CPD credits. The CME/CEU/CPD credits are issued after successful completion of all assignments. An **OPTIONAL "closed book"** examination may be taken by students at the end of the course. The examination is worth 70% of the course grade. The passing grade for every course is 70% of the combined assignment and final examination marks.

**FINAL EXAMINATIONS:** Students have the option of also taking a final examination in each course after all course module assignments have been completed and passed. The final examination may be taken online or hard copy. The final examination is "closed book" format ( no study materials allowed) and administered by an invigilator. The final examination consists of 100 or more multiple choice style questions aimed at preparing students for the registry examination.

**THE FINAL EXAMINATIONS** provide excellent opportunities to write Registry type examinations under exam room conditions. The exams allow students to assess their levels of knowledge and to target any areas of study which may require more attention prior to the Registry exam. Students keep their final examinations.

## **INTRODUCTION TO ULTRASOUND COURSE #001**

**APPROVED FOR 10 CME/CEU/CPD CREDITS**

### **INSTRUCTORS:**

**Rebecca Boutros**  
*BEd, BSc, RDCS, RVT*

**Stuart Gibbs**  
*BSc, RT(R), RDMS, RDCS, RVT  
FCSDMS, CRGS, CRCS, CRVS*

**Merle McCann**  
*BA, RTR, AC(R), RDMS, RDCS*

**Shayna Mole**  
*BMRSc, RDMS, RVT  
CRGS, DMS(ON)*

**INTRODUCTION TO ULTRASOUND** is a basic course offered to any person interested in learning how ultrasound works and how it is currently used in medical diagnoses.

No experience in diagnostic ultrasound is necessary to enroll in this course. The course will be of particular interest to:

- students planning a career and formal training in diagnostic ultrasound and
- to sonographers who wish to investigate the scope of current ultrasound applications.

An overview of the applications of diagnostic ultrasound is given for all the areas listed in the module content.

The online exam was great! It was easy to use with the same format as the assignments throughout the course and I loved being able to see my mark right away instead of waiting for the mail. I think it also makes it pretty easy on the invigilator as they just have to enter the password and the exam is timed automatically. J.F. BC

### **MODULE CONTENT**

**Module One** - Basic ultrasound physics and equipment. Major applications: obstetrics and gynecology

**Module Two** - Major applications: abdomen, superficial scanning, breast, musculoskeletal ultrasound, neonatal brain and spinal cord

**Module Three** - Major applications: echocardiography and vascular ultrasound



**THIS COURSE GIVES AN  
EXCELLENT OVERVIEW OF  
THE USE OF MEDICAL  
ULTRASOUND**

## **SONOGRAPHY PRINCIPLES AND INSTRUMENTATION COURSE #002A**

### **APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**  
**CHRIS**  
**HARRINGTON**

*RT(NM), RDMS,  
RDCS, RVT*

*CRGS, CRCS, CRVS*



**SONOGRAPHY PRINCIPLES AND INSTRUMENTATION (SPI) is a user-friendly course written by an experienced sonographer and instructor who has helped countless Burwin students pass Registry examinations. This course focuses on the essential aspects of sonography principles, physics, and instrumentation needed TO PREPARE FOR, AND TO CONFIDENTLY TAKE, REGISTRY CREDENTIALING EXAMINATIONS.**

**Although the learning emphasis is on clinical knowledge, some theory is covered specifically for Registry purposes and for which there is only minimal practical relevance. Students are expected to know and understand some common equations but mostly from a conceptual or relational aspect.**

**This course provides ample opportunity to test your knowledge and understanding with numerous exercises, four "open book" assignments and an OPTIONAL final**

**"closed book" examination. The final examination provides valuable feedback on areas of strength and weakness which will assist in focused preparation for Registry Credentialing Examinations.**

### **MODULE CONTENT**

**Module One - physical principles; units of measurement; properties of ultrasound waves; interactions of sound with tissue; power, intensity, and amplitude; range equation; pulsed and continuous wave concepts.**

**Module Two - transducer construction and characteristics; sound beams; spatial resolution; transducer selection; Doppler principles and instrumentation; hemodynamics.**

**Module Three - pulse-echo instrumentation; display modes and their formation; transmission and reception of ultrasound; beam formation; pre and post processing techniques; real-time ultrasound principles and transducer types; tissue harmonic imaging; recording and storage devices.**

**Module Four - patient care, safety, and communication; biological effects and ALARA; pulse-echo imaging and Doppler artifacts; quality assurance and quality control of equipment.**

## **ULTRASONOGRAPHY OF THE ABDOMEN AND SMALL PARTS PART 1 COURSE #003**

### **ABDOMEN PART 1 APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**  
**MERLE MCCANN**  
BA, RTR, AC(R),  
RDMS, RDCS



**ULTRASONOGRAPHY OF THE ABDOMEN & SMALL PARTS** is a comprehensive two-part course designed:

- for students preparing to write the Registry credentialing examination in Abdomen and
- for practicing abdominal sonographers who wish to review current Abdominal Ultrasound and acquire educational credits or units
- for cross-training into abdominal ultrasound

The two-part course covers **ALL ASPECTS OF ABDOMINAL ULTRASOUND** listed on the Registry Examination Content Outline. This includes pertinent gross anatomy, sectional anatomy, physiology, pathology and pathophysiology. In addition, the sonographic appearances of normal and abnormal structures as well as clinically significant Doppler applications are presented throughout each part of the course.

\* Included in **EACH PART** are approximately 300 Registry type examination **QUESTIONS** and an ultrasound image atlas containing about 200 high quality **SCANS**.

An **OPTIONAL** examination is available after successful completion of the four assignments. The exam provides an excellent opportunity to write Registry examinations under exam room conditions.

The courses are sequential so it is recommended that Part 1 be taken before Part 2. Both courses may be taken simultaneously. Sonographers with an Abdominal specialty credential, wishing to review, may take the courses in any order.

#### **MODULE CONTENT FOR PART ONE:**

**Module One** - introduction to ultrasound physics, procedures related to patient care, safety, communication and prevention of transmissible infections; the causes, development and clinical consequences of disease; Doppler physics and characteristic waveforms.

**Module Two** - normal abdominal vascular anatomy and sonography; sonography of abdominal vascular problems.

**Module Three** - normal liver anatomy and physiology; normal hepatic sonography; introduction to cellular pathology; sonography of hepatic pathology.

**Module Four** - ultrasound of the biliary system; sonography of the retroperitoneum to include the adrenal glands.



## **ULTRASONOGRAPHY OF THE ABDOMEN AND SMALL PARTS PART 2 COURSE #004**

### **ABDOMEN PART 2 APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**  
**MERLE MCCANN**  
BA, RTR, AC(R),  
RDMS, RDCS



**ULTRASONOGRAPHY OF THE ABDOMEN & SMALL PARTS** is a comprehensive two-part course designed:

- for students preparing to write the Registry credentialing examination in Abdomen
- for practicing abdominal sonographers who wish to review current Abdominal Ultrasound and acquire educational credits or units
- for cross-training into abdominal ultrasound

The two-part course covers **ALL ASPECTS OF ABDOMINAL ULTRASOUND** listed on the Registry Examination Content Outline. This includes pertinent gross anatomy, sectional anatomy, physiology, pathology and pathophysiology. In addition, the sonographic appearances of normal and abnormal structures as well as clinically significant Doppler applications are presented throughout each part of the course.

\*Included in **EACH PART** are approximately 300 Registry type examination **QUESTIONS** and an ultrasound image atlas containing about 200 high quality **SCANS**.

An **OPTIONAL** examination is available after successful completion of the four assignments. The exam provides an excellent opportunity to write Registry type examinations questions under exam room conditions.

The courses are sequential so it is recommended that Part 1 be taken before Part 2. Both courses may be taken simultaneously. Sonographers with an Abdominal specialty credential, wishing to review, may take the courses in any order.

#### **MODULE CONTENT FOR PART TWO:**

**Module One** - sonography of the normal and abnormal pancreas, sonography of the reticuloendothelial system (spleen & lymph nodes)

**Module Two** - sonography of the normal and abnormal urinary tract and male pelvis

**Module Three** - sonography of the peritoneum, anterior abdominal wall and groin, gastrointestinal tract, ultrasound-guided percutaneous needle biopsy and drainage procedures, and interventional sonography

**Module Four** - superficial sonography: neck (thyroid and parathyroid glands, lymph nodes, major salivary glands, miscellaneous neck pathology), scrotum, penis, miscellaneous "lumps and bumps", and infant hip.

**"I'm impressed with the extensive scan atlas and descriptions included, love the layout of the text.(easy to follow)" K.W. ON**

## **TESTIMONIALS**

***"There is a very fast turn around time for everything.  
Vascular Technology was a big help.  
I passed the Board 1<sup>st</sup> time." C.P. New York***

***"The course was excellent . . it had a great mix of the Obstetric things that I didn't know or didn't remember. This course would be a lifesaver to those Obstetrics sonographers that do not know pediatric cardiology and the related pathology. I am impressed and will share my opinion with those Obstetrics people I know." B.H. CO***

***"There was a lot of information in this course, it was organized really well and was straight forward. The highlighted material was what was most relevant. This made studying easier." L.C. ON***

***"The course material is straight forward and easy to grasp.  
I will encourage my staff to use Burwin courses to facilitate cross training in Pediatric Echocardiography.  
Thank you for providing me with a solid foundation of Pediatric Echocardiography to better understand and serve my patients and community." J.D. New York***

***"The Burwin courses are such a huge help for general sonographers like me. Definitely they are worth recommending to all my colleagues in the hospitals and other ultrasound organizations here in the Kingdom Of Saudi Arabia. The Burwin Institute is one of a kind. Your staff are all considerate and polite. Keep up the good work." E. A. Kingdom of Saudi Arabia***

***"The hospital I am employed at has a special care nursery for premature infants and the Pediatric Echocardiography course has been a tremendous help with my confidence in scanning these babies." K.C. BC***



## GYNECOLOGICAL ULTRASOUND COURSE #005

### APPROVED FOR 30 CME/CEU/CPD CREDITS

**Instructor:**

**SHAYNA  
MOLE**

**BMRS<sub>c</sub>, RDMS, RVT**

**CRGS, DMS(ON)**



**GYNECOLOGICAL ULTRASOUND is designed:**

- *for students preparing to write the Registry credentialing examination in Obstetrics & Gynecology (OB/GYN)*
- *for registrants who wish to review current Gynecological Ultrasound and acquire educational credits or units*
- *for cross training into gynecological ultrasound*

*The course is comprehensive and covers ALL ASPECTS OF GYNECOLOGICAL ULTRASOUND listed on the Registry Examination Content Outline. The course includes over 300 questions and a scan atlas with over 300 high quality ultrasound images depicting normal anatomy, techniques, common artifacts, interpretation pitfalls, and pathologies. No textbook is required.*

*The course is organized into four modules. An "open book" assignment consisting of multiple-choice questions is completed by the student at the end of each module and is either returned by fax or mail to Burwin for marking or is completed online.*

*The course is completed by taking an OPTIONAL "closed book" final examination which serves as a "warm up" for the Gynecology portion of the Registry credentialing examination in OB/GYN.*

*A BURWIN COURSE CERTIFICATE for Ultrasound in Obstetrics and Gynecology is issued to students who complete and pass both Gynecological Ultrasound (course #005) and Obstetrical Ultrasound (course #006). The minimum passing grade for each course is 70%.*

### MODULE CONTENT

*Module One - applied sonography principles and instrumentation, techniques for pelvic sonography, ultrasound guided interventional procedures, diagnostic sonography standards of practice, clinical indications for pelvic sonography, pertinent gynecological history, non ultrasound tests for gynecological diagnosis*

*Module Two - pelvic anatomy, reproductive physiology*

*Module Three - abnormalities of the ovary, endometriosis, pelvic inflammatory disease, miscellaneous pelvic masses, infertility, postsurgical ultrasound evaluation, distal urinary tract abnormalities, bowel abnormalities*

*Module Four - intrauterine contraceptive devices, congenital anomalies of the uterus and vagina, acquired abnormalities of the body of the uterus, acquired abnormalities of the cervix and vagina, abnormalities of the endometrium, postmenopausal pelvic sonography, pediatric gynecologic pelvic sonography, extrapelvic sonographic findings associated with gynecologic diseases*

***"I passed my ARDMS Gyne/OBS (85.4%) with flying colors thanks to your institute!" A.M.ON***

## **OBSTETRICAL ULTRASOUND COURSE #006**

**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**

**SHAYNA**

**MOLE**

**BMRSc, RDMS, RVT**

**CRGS, DMS(ON)**



**OBSTETRICAL ULTRASOUND is designed:**

- *for students preparing to write the Registry credentialing examination in Obstetrics & Gynecology (OB/GYN)*
- *for registrants who wish to review current Obstetrical Ultrasound and acquire educational credits or units*
- *for cross training into obstetrical ultrasound*

*The course is comprehensive and covers ALL ASPECTS OF OBSTETRICAL ULTRASOUND listed on the Registry Examination Content Outline. The course includes 300 questions and a scan atlas with approximately 400 high quality ultrasound images depicting normal anatomy, techniques, common artifacts, interpretation pitfalls and pathologies. No textbook is required.*

*The course is organized into four modules. An "open book" assignment consisting of multiple-choice questions is completed by the student at the end of each module and returned to Burwin by fax or mail for marking or is completed online. The course is completed by taking an OPTIONAL "closed book" final examination which serves as a "warm up" for the Obstetrics portion of the Registry credentialing examination in OB/GYN.*

*A BURWIN COURSE CERTIFICATE for Ultrasound in Obstetrics and Gynecology is issued to students who complete and pass both Gynecological Ultrasound (course #005) and Obstetrical Ultrasound (course #006). The minimum passing grade for each course is 70%.*

### **MODULE CONTENT**

*Module One - applied sonography principles and instrumentation, clinical indications for obstetrical ultrasound, clinical diagnosis of pregnancy, ultrasound in the evaluation of early pregnancy, early pregnancy failure, ectopic pregnancy, gestational trophoblastic disease, adnexal and uterine masses in pregnancy, incarcerated gravid uterus*

*Module Two - ultrasound estimation of gestational age in the second and third trimesters of pregnancy, fetal growth disorders, fetal maturity, multifetal pregnancy, prenatal testing and diagnosis, antepartum fetal assessment, maternal complications of pregnancy and acute abdominal pain, postpartum maternal complications*

*Module Three - the lower uterine segment, the cervix, the fetal membranes, the amniotic fluid, the placenta, the umbilical cord*

*Module Four - fetal demise in the second and third trimesters of pregnancy, fetal posture, fetal anatomy, fetal anomalies*



**EDUCATION FOR THE  
MEDICAL PROFESSION  
SINCE 1985**

**"STUDY WHILE YOU WORK"**

**LEARN ON THE JOB**

**HOME STUDY COURSES  
IN  
GENERAL ULTRASOUND  
BREAST SONOGRAPHY  
MUSCULOSKELETAL  
ECHOCARDIOGRAPHY  
VASCULAR TECHNOLOGY**

**\*MOST COURSES ARE WORTH  
30 CME/CEU/CPD CREDITS\***

**[www.burwin.com](http://www.burwin.com)**

**1-800-322-0737 (Atlantic Time)**



## **NEUROSONOLOGY PART 1 COURSE #008**

### **NEUROSONOLOGY PART 1 APPROVED FOR 15 CME/CEU/CPD CREDITS**

**Instructor:**  
**MERLE MCCANN**  
BA, RTR, AC(R),  
RDMS, RDCS



**NEUROSONOLOGY** is organized as a two-part course - **PART 1** and **PART 2**.

- *The courses are designed to prepare the applicant for the Neurosonology portions of the Pediatric Sonography Registry Content Outline.*
- *It will also be of interest to sonographers who wish to update their knowledge in this field and acquire educational credits or units.*
- *This course has also proved beneficial to obstetrical sonographers who scan the fetal brain transvaginally in the second and third trimester.*

*Gross anatomy, sectional anatomy and pathology of the brain and spinal cord are presented in addition to the sonographic appearances of normal and abnormal structures. Current Doppler applications are also discussed. It is recommended that **PART 1** be taken before **PART 2** as they are sequential courses however, both courses may be taken during the same term.*

*Sonographers with a Neurosonology credential, wishing to review, may take the courses in any order.*

#### **PART I MODULE CONTENT:**

**Module One** - anatomy and normal sonographic appearances of the bony cranium; embryonic brain; cerebral lobes and fissures; medical care of the neonate during scanning; imaging approaches; examination protocol; documentation and standard viewing conventions.

**Module Two** - anatomy and normal sonographic appearances of the cerebral commissures; basal nuclei; thalamus and hypothalamus; functional areas of the cerebral cortex; the midbrain; hindbrain; subarachnoid spaces; folds of dura mater and the ventricular system.

**Module Three** - blood supply to the brain; veins of the brain; venous sinuses; Doppler theory, technique and applications in normal and abnormal preterm and term infants.

***"(I have) been scanning heads for 12+ years. (It is) actually interesting to know what I'm looking at. Great course."***

**NEUROSONOLOGY  
PART 2 COURSE #009**

**NEUROSONOLOGY PART 2 APPROVED FOR 15 CME/CEU/CPD CREDITS**

**Instructor:**  
**MERLE MCCANN**  
BA, RTR, AC(R),  
RDMS, RDCS



**NEUROSONOLOGY is organized as a two-part course - PART 1 and PART 2.**

- **The courses are designed to prepare the applicant for the Neurosonology portions of the Pediatric Sonography Registry Content Outline.**
- **It will also be of interest to sonographers who wish to update their knowledge in this field and acquire educational credits or units.**
- **This course has also proved beneficial to obstetrical sonographers who scan the fetal brain transvaginally in the second and third trimester.**

**Gross anatomy, sectional anatomy and pathology of the brain and spinal cord are presented in addition to the sonographic appearances of normal and abnormal structures. Current Doppler applications are also discussed. It is recommended that PART 1 be taken before PART 2 as they are sequential courses however, both courses may be taken during the same term.**

**Sonographers with a Neurosonology credential, wishing to review, may take the courses in any order.**

**PART 2 MODULE CONTENT:**

**Module One - sonographic pathology: hydrocephalus - types, measurements, effects, treatment, complications and sonographic appearances. Intracranial hemorrhage - clinical findings, causes, timing, scan protocol, blood tests, types of ICH, grading, ECMO, hypoxic-ischemic disease and sonographic appearances.**

**Module Two - sonographic pathology: congenital disorders; inflammatory disorders; intracranial neoplasms and sonographic appearances. Physics, instrumentation and artifacts.**

**Module Three - spinal sonography- anatomy, functions, cord tethering, open and closed dysraphism, tumors and sonographic appearances. Intraoperative Neurosonography - equipment, technique and applications.**



**ADULT ECHOCARDIOGRAPHY PART 1  
COURSE #017**

**ADULT ECHOCARDIOGRAPHY PART 1 APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**

**REBECCA**

**BOUTROS**

*BEd, BSc, RDCS, RVT*

*DMS(ON)*



**ADULT ECHOCARDIOGRAPHY is a comprehensive two-part course designed :**

- **for students preparing to write the Adult Echocardiography Registry Credentialing Examination and the Non-Invasive Echocardiography Registry Examination and**
- **for practicing adult echocardiographers who wish to review current adult echocardiographic ultrasound while acquiring educational credits or units. Registered Echocardiographers may take the courses in any order**

**This two-part course covers ALL ASPECTS OF THE ADULT ECHOCARDIOGRAPHY Registry Examination Content Outline and will PREPARE YOU FOR BOTH THE THEORETICAL AND VIDEO PORTIONS OF THE REGISTRY CREDENTIALING EXAM AND THE NON-INVASIVE ECHOCARDIOGRAPHY REGISTRY EXAMINATION.**

**\* Part 1 includes a selection of video cases of normal and abnormal adult echocardiographic examinations.**

**Each module is completed by answering questions which may be mailed or faxed to the instructor or completed online. Descriptive answers are provided by the instructor.**

**Students may take an OPTIONAL closed book examination at the end of the course. This allows students to assess their level of knowledge and to target any area of study which may require more attention prior to the RCE.**

**PART 1 MODULE CONTENT**

**Module One - Common abbreviations; overview of cardiac structure and function; pulmonary and systemic circulations; cardiac valves and chambers; cardiac septation; external features of the heart; cardiac circulation; conduction system; hemodynamics and the cardiac cycle; provocative maneuvers.**

**Module Two - 2-D views; M-Mode evaluation.**

**Module Three - Contrast studies, TEE, stress echo, 3D echo, TDI, other cardiac imaging procedures, systolic and diastolic ventricular function assessment, MPI, cardiac signs and symptoms and patient assessment**

**Module Four - Introduction to valvular stenosis, insufficiency and prolapse. Mitral, aortic, tricuspid and pulmonic stenosis.**

**ADULT ECHOCARDIOGRAPHY PART 2  
COURSE #018**

**ADULT ECHOCARDIOGRAPHY PART 2 APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:  
REBECCA  
BOUTROS**

*BEd, BSc, RDCS, RVT*

*DMS(ON)*



**ADULT ECHOCARDIOGRAPHY** is a comprehensive two-part course designed :

- for students preparing to write the Adult Echocardiography Registry Credentialing Examination and the Non-Invasive/Echocardiography Registry Examination

**and**

- for practicing adult echocardiographers who wish to review of current adult echocardiographic ultrasound while acquiring educational credits or units. Registered Echocardiographers may take the courses in any order.

**This two-part course covers ALL ASPECTS OF THE ADULT ECHOCARDIOGRAPHY Registry Examination Content Outline and will PREPARE YOU FOR BOTH THE THEORETICAL AND VIDEO PORTIONS OF THE REGISTRY CREDENTIALING EXAM AND THE NON-INVASIVE/ECHOCARDIOGRAPHY REGISTRY EXAMINATION.**

*Each module is completed by answering questions which may be mailed or faxed to the instructor or completed online. Descriptive answers are provided by the instructor.*

*Students may take an OPTIONAL closed book examination at the end of the course. This allows students to assess their level of knowledge and to target any area of study which may require more attention prior to the RCE.*

**PART 2 MODULE CONTENT**

**Module One** - Mitral, aortic, tricuspid and pulmonic insufficiency; mitral prolapse.

**Module Two** - Infective endocarditis; prosthetic valves and related pathology; introduction to acquired heart disease; ischemic heart disease; pericardial disease.

**Module Three** - Cardiac embryology, fetal and postnatal circulation, congenital heart disease in the adult, and congenital repairs and palliative procedures.

**Module Four** - Congenital syndromes, acquired syndromes, conduction abnormalities, patient care, medical ethics and basic cardiac pharmacology

***NB: Part 2 includes a selection of video cases of normal and abnormal adult echocardiographic examinations and self-assessment practice videos with questions and answers.***



**PEDIATRIC ECHOCARDIOGRAPHY  
COURSE #015**

**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**  
**ANNA**  
**STEEVES**  
BHSc  
CRGS, CRCS



**PEDIATRIC ECHOCARDIOGRAPHY**  
**will be helpful:**

- **for those preparing for the Registry Credentialing Examination or**
- **for practicing pediatric echocardiographers who wish to review this specialty and acquire educational credits or units.**

**This course covers ALL ITEMS ON THE PEDIATRIC ECHOCARDIOGRAPHY REGISTRY EXAMINATION CONTENT OUTLINE. This includes cardiac embryology; the normal fetal and postnatal heart and their circulations; hemodynamics; scanning views and techniques; congenital and acquired cardiac pathology and its appearance on the echocardiogram.**

**\* Also included in the course are hundreds of questions similar to those on the Registry. The course also includes a selection of video cases of normal and abnormal pediatric echocardiographic examinations.**

**Each module is completed by answering questions which may be mailed or faxed to the instructor or completed online. Descriptive answers are provided by the instructor.**

**Students may take an OPTIONAL closed book examination at the end of the course. This allows the student to assess their level of knowledge and to discover any area of study which may require more attention prior to the Registry Credentialing Examination.**

**MODULE CONTENT**

**Module One - anatomy, physiology, hemodynamics, techniques and standard views**

**Module Two - methods of evaluation & functional assessment**

**Module Three - congenital pathology**

**Module Four - congenital pathology, acquired pathology**

**A UNIQUE SOURCE OF  
INFORMATION FOR PEDIATRIC  
ECHOCARDIOGRAPHERS**

**FETAL ECHOCARDIOGRAPHY  
COURSE #033**

**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**

**ANNA  
STEEVES**

**BHSc  
CRGS, CRCS**



***FETAL ECHOCARDIOGRAPHY is a four module course aimed at:***

- ***candidates preparing for the Registry examination or***
- ***practicing fetal echocardiographers who wish to review this specialty and acquire educational credits or units.***

***This course covers ALL ITEMS ON THE FETAL ECHOCARDIOGRAPHY REGISTRY EXAM CONTENT OUTLINE. This includes cardiac embryology, normal fetal anatomy and circulation, hemodynamics, scanning views and techniques, and description, incidence and echocardiographic appearances of both congenital and acquired cardiac pathology.***

***\* Also included in the course are hundreds of questions similar to those on the Registry. The course also includes a selection of video cases of normal and abnormal fetal echocardiograms.***

***Each module is completed by answering questions which may be mailed or faxed to the instructor or completed online. Descriptive answers are provided by the instructor.***

***Students may take an OPTIONAL closed book examination at the end of the course. This allows the student to assess their level of knowledge and to discover any areas of study that may require more attention prior to the Registry examination.***

**MODULE CONTENT**

***Module One - Indications for fetal echocardiographic examination, Timing of the fetal echocardiographic examination, Scanning techniques: standard views, m-mode evaluation, Doppler evaluation***

***Module Two - Normal anatomy, Physiology, Hemodynamics, Embryology***

***Module Three - Cardiac pathology including incidence, description and echocardiographic findings***

***Module Four - Cardiac pathology continued: Fetal dysrhythmias, Acquired pathology***

***"I was writing to thank you very much for your Fetal Echo course. It helped me a tremendous amount in understanding the fetal heart. I wanted to let you know I took the Fetal Echo Registry and passed with an 82%." D.R. TX***



## **TESTIMONIALS**

***"Keep up the Great Work!! The course was worth every penny I spent to purchase it!! Thank you" R.A. ON***

***"I liked the depth of information provided, as it never felt like I was just skimming the surface of a topic. I also liked the accompanying images with normal and abnormal appearances. There is nothing I disliked about the course." C.G. NZ***

***"Glad to inform you that I passed my vascular tech exam, thanks for Burwin's support." R.M. ON***

***"I'm not sure if I've THANKED you all enough for helping me obtain my ARDMS registration as a Registered Diagnostic Medical Sonographer (OB/GYN) so I just want to THANK you for the wonderful courses you provide. Without these courses I am sure that I would not have succeeded. P.J. SK***

***"Thank you very much for your Abdomen course. I took the registry last month and scored much better than I had anticipated. I was in the 87<sup>th</sup> percentile." M.M. FL***

***"What I like most about the Burwin courses is that I can do them at home in my free time and can work at my own pace!" K.B. KY***

**MUSCULOSKELETAL ULTRASOUND  
COURSE #032**

**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:  
MARGARET  
CORBETT**

**RT(R), RDMS,  
RDCS, RVT, RMSKS**

**CRGS, CRCS, CRVS,  
DMS(ON)**



*This comprehensive course is designed primarily for sonographers who wish to introduce themselves to the rapidly growing field of musculoskeletal (MSK) ultrasound. Covering the most common areas of MSK ultrasound performed today, the course will provide a valuable reference for this exciting imaging modality.*

*The course is totally self-contained and is composed of four modules. THERE IS ALSO A COMPREHENSIVE ATLAS OF MSK IMAGES DEPICTING NORMAL ANATOMY AS WELL AS NUMEROUS PATHOLOGIES AND ARTIFACTS.*

*Following each of the four modules, the student will complete an open book assignment. Each assignment is returned to the student with an explanatory answer key explaining the correct response. After finishing the course, each student has an opportunity to write an OPTIONAL closed book final exam written in the presence of an invigilator (exam supervisor).*

**MODULE CONTENT**

**Module One – An Overview Of MSK  
Ultrasound**

**Indications for MSK Ultrasound, An Overview of Normal Anatomy, Sonographic Appearance of Normal Tissues, An Overview of MSK Pathology, Introduction to MSK Scanning**

**Module Two – Upper Extremity**

**Bones of the Upper Extremity, Soft Tissue Anatomy, Scanning Protocols, Upper Extremity Pathology**

**Module Three – Lower Extremity**

**Bony Anatomy and Landmarks, Soft Tissue Anatomy, Scanning Protocols, Lower Extremity Pathology**

**Module Four – Miscellaneous Topics**

**Superficial Hernias, Developmental Dysplasia of the Hip, Pediatric MSK Ultrasound, Interventional Procedures, Patient Care**

**Preparing to write the  
RMSKS Registry Exam?**

**A fast effective way of obtaining the 30 MSK-related CME credits recommended by the registry is to take Burwin's MSK Home Study Course. Although CMEs are not required to apply for the RMSKS examination, ARDMS highly recommends and encourages applicants to earn a minimum of 30 MSK ultrasound specific CMEs to assist you in preparing to take the RMSKS examination. This course has been approved for 30 CME credits by the Society of Diagnostic Medical Sonography (SDMS). A CME certificate is issued to the student after successful completion of all 4 course assignments.**

**BREAST ULTRASOUND  
COURSE #031**

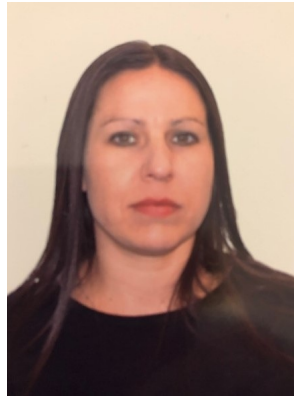
**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**

**JENNA  
WIEBE**

**BHSc, RDMS**

**CRGS, DMS(ON)**



*This comprehensive course is designed for sonographers and mammographers:*

- *preparing for the Registry examinations*
- *for sonographers and mammographers who wish to review current breast sonography and acquire educational credits or units.*

**THERE IS AN ATLAS FILLED WITH HIGH QUALITY BREAST IMAGES DEPICTING NORMAL ANATOMY, NUMEROUS BREAST PATHOLOGIES AND ARTIFACTS.**

*The course is totally self contained. There are two Optional Modules: Patient Care and Physics for Mammographers with questions and answers provided. These self study modules provide the fundamentals to complete the Breast Ultrasound course*

**Patient Care Module Content:** Patient Identification, Communication, Rights, Consent, Confidentiality, Safety, Cleaning of Equipment, Storage of Gels, Standard Precautions, Sterile Technique and Test Results.

**Physics for Mammographers Module Content:**

Generation Of Ultrasound, Ultrasound Wave Characteristics, Image Resolution, Ultrasound System Components, Transducers, Ultrasound Beam Profiles, How Sound Interacts with Matter, Image Display and Storage, Pre and Post Processing, Recording Media, Equipment Quality Control, Use of Tissue Equivalent Phantoms, Safety and Bioeffects, Doppler Ultrasound, Cleaning & Disinfecting Equipment.

**BREAST ULTRASOUND MODULE CONTENT**

**Module One** - Breast Cancer Facts, Figures and Risk Factors. Breast Instrumentation and Scanning Technique including: System setup, Transducers, Grayscale, Doppler, Patient positioning, Scan Planes, Scanning Technique, Image Annotation, Image Artifacts and New Technologies.

**Module Two** - Breast Anatomy including: Gross Anatomy of the Breast, Embryology, Vascular Anatomy, Lymphatic System of the Breast, Fibrous Planes, TDLU and the Lactiferous Ducts, Lymph Nodes, Pregnancy Induced Changes to the Breast, Involutional Changes to the Breast and The Male Breast.

**Module Three** - Breast Pathology, including: Benign versus Malignant Features, Compressibility, Vascularity, Effects of Masses on the Ducts, Lymphatic Involvement, Specific Benign Lesions, Specific Malignant Lesions, Congenital Breast Abnormalities, Gynecomastia, Ultrasound and Mammography BIRADS.

**Module Four** - Invasive and Other Procedures including: Localizations, Core Biopsy, FNA, Mammotomy, ABBI, Imaging Breast Implants, MRI Appearances, Ductography, Sentinel Node Procedure, Normal Mammogram and Mammography versus Ultrasound Appearances.

*At the end of each module, the student completes an open book assignment. Each assignment is returned with an explanatory answer key indicating the correct response. After finishing the course, each student has an opportunity to write an OPTIONAL closed book final examination written in the presence of an invigilator (exam supervisor). The exam simulates the Registry Breast Ultrasound exam.*

***"We have a Breast Health Centre & do 3000+ mammo's and many U/S breasts - I learned a lot!" D.C. ON***

**Over the years NINA ROMANOVA has been a valuable resource for Burwin's Breast Course. We thank Nina for her ongoing contribution.**



**VASCULAR TECHNOLOGY  
COURSE #014**

**APPROVED FOR 30 CME/CEU/CPD CREDITS**

**Instructor:**

**STUART  
GIBBS**

**BSc, RT(R), RDMS,  
RDCS, RVT**

**FCSDMS, CRGS,  
CRCS, CRVS**



***The Vascular  
Technology  
course is designed:***

- ***as a Registry credentialing exam preparation course (RVT/CCI-RVS)***
- ***as a means for registrants to acquire educational credits or units***
- ***as preparation for future employment in a modern Vascular Lab***

***Students preparing for the Registered Vascular Technologist (RVT) exam and the Non-Invasive Vascular Registry Examination (CCI-RVS exam) will find the Vascular Technology course covers ALL ASPECTS OF VASCULAR TECHNOLOGY found on the current Registry Examination Content Outlines. No textbook is required.***

***There is an open-book assignment at the end of each module and an OPTIONAL final examination using the Registry Credentialing Examination format. Students keep their exams and find the feedback extremely useful in determining their strengths and weaknesses.***

**MODULE CONTENT**

**Module One - anatomy of the arterial & venous systems, vascular pathology**

**Module Two - patient history & physical examination (arterial), pressure testing, Doppler velocimetry in arterial disease testing, plethysmography, duplex imaging, spectral analysis & arteriography, deep Doppler applications, abdominal arteriography, peripheral vascular arteriography**

**Module Three - patient history & physical examination (venous), venous Doppler of the lower extremity, outflow plethysmography, duplex imaging of the peripheral venous system, assessing venous valvular competence, peripheral vascular venography**

**Module Four - patient history & physical examination (cerebrovascular), direct tests, indirect tests, transcranial Doppler, cerebral arteriography & intervention**

**Optional Module - ultrasound production & interaction with matter, ultrasonic imaging, two dimensional ultrasonic imaging, Doppler imaging & instrumentation, vascular hemodynamics, quality assurance & testing**



**CONTINUING MEDICAL EDUCATION  
(CME/CEU/CPD) CREDITS**

Burwin Institute courses are approved by the Society of Diagnostic Medical Sonographers (SDMS) and accepted for CME/CEU/CPD credits by the following listed bodies. To qualify for CME/CEU/CPD credits, all assignments in a course must be successfully completed. When you register in a course, you will be asked to complete a CME/CEU/CPD form and provide the required information such as your name, date of birth and association membership number. With successful completion\* of a course, your name will be placed on a CME/CEU/CPD credit roster and sent to the appropriate body.

**AMERICAN REGISTRY for DIAGNOSTIC  
MEDICAL SONOGRAPHY (ARDMS)**

All SDMS approved Burwin Institute courses are accepted by the ARDMS for CME credits. In order to register your credits, we require date of birth and your ARDMS registration number. Please see course description listings for number of CMEs awarded for each course. Information regarding CME requirements is available at [www.ardms.org/](http://www.ardms.org/)

**SONOGRAPHY CANADA**

All SDMS approved Burwin Institute courses are accepted by SONOGRAPHY CANADA for CPD credits. In order to register your credits, we require your date of birth and SONOGRAPHY CANADA registration number. Please see course description listings for number of CPDs awarded for each course. Information regarding CPD requirements is available at [www.sonographycanada.ca](http://www.sonographycanada.ca)

**CARDIOVASCULAR CREDENTIALING  
INTERNATIONAL (CCI)**

All SDMS approved Burwin Institute courses are accepted by CCI for CEU credits. In order to register your credits, we require your date of birth and CCI registration number. Please see course description listings for number of CEUs awarded for each course. Information regarding CEU requirements is available at [www.cci-online.org/](http://www.cci-online.org/)

**AMERICAN REGISTRY of  
RADIOLOGICAL TECHNOLOGISTS  
(ARRT)**

All SDMS approved Burwin Institute courses are accepted by the American Society of Radiologic Technologists (ASRT) for Category A ARRT CME credits. In order to register your credits with the ARRT, we require your date of birth and ARRT number. Please see course description listings for number of CMEs awarded for each course. Information regarding the CME requirements is available at [www.arrt.org/](http://www.arrt.org/)

**SOCIETY for VASCULAR ULTRASOUND  
(SVU)**

All SDMS approved Burwin Institute courses are a practical means for vascular professionals to maintain their CME/CEU/CPD credits with the ARDMS, SONOGRAPHY CANADA, ARRT or CCI.

**STATE of FLORIDA RADIOLOGIC  
TECHNOLOGISTS**

All SDMS approved Burwin Institute courses are accepted by the State of Florida, Department of Health and Rehabilitative Services, Office of Radiation Control for CME credits. To register your credits under this category, we require your date of birth and State of Florida radiologic technologist license number. Please see course description listings for number of CMEs awarded for each course. Information regarding the CME requirements is available at [www.fsrt.org/](http://www.fsrt.org/)

**STATE of CALIFORNIA REGISTERED  
NURSES**

All SDMS approved Burwin Institute courses are accepted by the State of California Board of Registered Nurses for Category 1 CME credits. In order to receive credits under this category, we need date of birth and your State of California registered nurse license number. Please see course description listings for number of CMEs awarded for each course. Information regarding the CME requirements is available at [www.rn.ca.gov/](http://www.rn.ca.gov/)

**SEE COURSE LISTINGS FOR NUMBER OF  
CMEs/CEUs /CPDs AWARDED FOR EACH  
COURSE.**





## **PAYMENT POLICY**

**Full tuition payment must accompany an application for course enrollment. Payment may be made by personal check, institution or company check, bank money order, Visa Debit, Visa, Mastercard, Discover, American Express or JCB (Japanese Bureau). When paying by credit card, make sure to accurately record your card number and the EXPIRY DATE. Burwin will not accept a purchase order unless accompanied by tuition payment. Burwin does not mail courses to students C.O.D.**

## **ENROLLMENT**

**Enrollment in a course begins when an application is received by Burwin accompanied by full payment.**

## **CANCELLATION POLICY**

- **CANCELLATION PRIOR TO A COURSE BEING MAILED**

**If a student cancels the registration PRIOR to the course being mailed, a full refund will be made to the student.**

**N.B. Course materials are normally mailed the same day the registration and payment are received by Burwin.**

- **CANCELLATION WITHIN 10 DAYS OF REGISTRATION**

**If a student decides to cancel the registration AFTER the course material has been mailed, but within**

**10 days of registering, the fees and applicable taxes paid will be reimbursed less a \$50.00 administration fee per course.**

**This refund will be generated when the UNOPENED course materials are received by Burwin.**

**N.B. If the course materials have been opened, the withdrawal policy will apply.**

## **30 DAY WITHDRAWAL POLICY**

**When a student withdraws from a course within 30 days of registering, the fees plus applicable taxes will be reimbursed less a \$75.00 administration fee per course.**

**THE REFUND WILL BE GENERATED WHEN THE UNUSED AND UNMARKED COURSE MATERIALS ARE RECEIVED BY BURWIN.**

**The withdrawal policy applies to both regular and package deal registrations.**

## **RETURNING NOTES**

**In order to guarantee delivery of the course materials books to Burwin, the course materials should be returned by registered mail or some form of guaranteed delivery service.**

**When filling out the customs form please write, PRINTED MATERIAL ORIGINATING IN CANADA, NO COMMERCIAL OR RESALE VALUE.**



## **ENROLLMENT INSTRUCTIONS**

1. **Select COURSE(S) in which you wish to enroll by entering an (x) in the appropriate box on the registration form located on the back cover of this brochure.**
2. **Determine the total tuition for the courses you have selected and add shipping and handling costs (see table below).**
3. **Send a check payable to Burwin or complete the credit card information. Visa Debit, Visa, Mastercard, Discover, American Express or JCB (Japanese Bureau) only.**
4. **Mail in your completed registration form along with your check or credit card information.**
5. **Credit card registrations may be faxed to 902-634-3818.**
6. **You may also register online at [www.burwin.com](http://www.burwin.com)**

**Burwin thanks you for your interest in our programs. Do not hesitate to contact us if you have any questions or concerns.**

**PHONE: 902-634-3238 (Atlantic Time) or Toll Free 1-800-322-0737 (Atlantic Time)**

**Fax: 902-634-3818**

**E-mail: [burwin@burwin.com](mailto:burwin@burwin.com)**

**Web: [www.burwin.com](http://www.burwin.com)**

### **SHIPPING & HANDLING RATES**

	1 COURSE	2 COURSES	3 COURSES	PACKAGE DEAL
CANADA	\$20.00	\$25.00	\$30.00	\$40.00
UNITED STATES	\$30.00	\$35.00	\$40.00	\$60.00
INTERNATIONAL	\$80.00	\$90.00	\$120.00	\$180.00

**Canadian Students: GST/HST is included in Shipping & Handling fees.  
United States & International Students: Shipping & Handling fees are payable in US Dollars.**

**Please add shipping & handling costs on the registration form.**



**SAVE 20%**

**GENERAL ULTRASOUND**  
**PACKAGE DEAL**  
**Course #GUP**

**FIVE COURSES FOR**  
**THE PRICE OF FOUR**

*If you are working in a general ultrasound department, your case load is probably mainly abdomen, obstetrics and gynecology.*

*To cover all the theory you need for this case load, and to prepare for Registry credentialing examinations, you need to take five Burwin courses: Abdomen Part 1 & Part 2, Gynecological Ultrasound, Obstetrical Ultrasound and Sonography Principles & Instrumentation.*

*Taken individually, the cost is \$2375.00. This is very good value for your money. However you can get incredible value for your money by enrolling in all five courses at once and only paying \$1900.00 which is the cost of four courses. This amounts to a 20% savings.*

**YOU SAVE \$475.00**

*"I have already taken the Physics, Abdomen and Obstetrics & Gynecology courses and Registry exams. They prepared me very well so I did not hesitate to take the Breast Ultrasound course." D.M.-J. MN*

**\*PLEASE NOTE TUITION FEES ARE SUBJECT TO  
CHANGE WITHOUT NOTICE. THIS SPECIAL PRICE APPLIES TO  
THE SAME INDIVIDUAL ENROLLING IN THE FIVE COURSES**