**Valencia Community College – West Campus**

**Name of Course:** RTE 3590 Computed Tomography, CRN Online

**Professor:** Beverly Bond M.Ed. R.T. (R)

**Course Date:** May 7 – July 27 2012

**Course Duration:** 12 weeks

**Prerequisites:** Appropriate ARRT certification

**Co requisites:** None

**Text book:** Seeram, Euclid. *Computed Tomography: Physical Principles, Clinical Applications, and Quality Control.* Third edition, 2009. Saunders.

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**Course Description:**

Course content is designed to impart an understanding of the physical principles and instrumentation involved in computed tomography (CT). Content will include detailed coverage of procedure protocols for CT imaging and a thorough coverage of common diseases diagnosable using CT.

**Competencies & Evaluation:**

* Student Core Competencies (Think, Value, Communicate, and Act)
* Prepare students to succeed in the community world
* **Goals of the Course:**
* Analyze the historical development of CT, CT generations, characteristics of X-radiation.
* Discuss digital imaging processing and physical principles of CT.
* Describe data acquisition concepts and image reconstruction.
* Explore instrumentation and image manipulation.
* Explore image quality and radiation protection practices in CT.
* Analyze Technologies Related to Computed Tomography and Applications with the use of it.
* Review the pathological correlation with the different body systems.
* Discuss protocols for Computed Tomography studies of the body, nervous system and pediatric.
* Analyze methods for patient care in the modality of Computed Tomography.

**RTE 3590: (Subject to changes)**

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| **Week** | **Module** |
| 1 | Historical development/generations and characteristics of X-radiation |
| 2 | Digital image processing & physical principles of CT |
| 3 | Data acquisition concepts and image reconstruction |
| 4 | Instrumentation and image manipulation |
| 5 | Image quality & radiation protection practices in CT |
| 6 | Technologies and applications in Computed Tomography |
| 7 | Pathological correlation in CT, autoimmune, cardiovascular & central nervous system, circulatory, lymph, endocrine and respiratory systems |
| 8 | Pathological correlation in CT, hepatobiliary & musculoskeletal systems & pediatric, urinary and reproductive systems |
| 9 | Computed Tomography of the head, neck and spine |
| 10 | Computed Tomography of the body |
| 11 | Pediatric Computed Tomography |
| 12 | Patient Care, IV procedures & contrast agents |
| 13 | Final exam |

**Learning Methods:**

* Discussions
* Problem based learning
* Exploration, conceptualization, application

**Evaluation Methods:**

Quizzes 30%

Assignments/Discussions 40%

Final exam 30%

Total **100%**

**Evaluation Scale:**

93-100 A

85-92 B

76-84 C

70-75 D

69-0 F

**Note:** Course must be approved with “C” or more.

**Helpful Information for ATLAS, Blackboard and General Computer:**
**Important Notice:** Your instructor CANNOT providetechnical support. If you are experiencing problems with Atlas, Blackboard, etc. you will need to contact the appropriate department: Web CT (407)582-5600 (available 24/7) or webcthelp@valenciacc.edu    The ATLAS help desk phone # is (407)582-5590

**\*\*\*\*A special note about computers**:  Even though computers and word-processing software are marvelous time and energy-saving devices, they can and do cause problems with the production of your documents.  Please be aware that a broken or ill-functioning computer, or the inability to retrieve, produce or submit your assignments from a computer will not be accepted as a valid excuse for a document that is submitted late.  I advise you to save all your documents to a floppy disk, a CD, or a flash drive and your hard drive.

**Course Policies:**

* Grading
* Evaluation
* Final Exam
* Make-up Policy
* Special Rules/Classroom Rules
* Withdrawal Deadline for "W" Grade:

**Withdrawal Policy:**
 During a first or second attempt in the same course at Valencia, if you withdraw, or are withdrawn by the professor, you will receive a W (Withdrawn). You will not receive credit for the course, and the W will not be calculated in your grade point average: however, the enrollment will count in your total attempts in the specific course.

**Withdrawal Deadline – June 29**

**No Show Status:**
Even though the class is online, attendance is required beginning the first week of the term. If you do not attend class during the first week, you may be withdrawn from the class as a "no show". In this event you will be billed for the class and a "W" will appear on your transcript for the course.

 **Academic Honesty Policy Number: 6Hx28:10-16**
all forms of academic dishonesty are prohibited at Valencia Community College. Academic dishonesty includes, but is not limited to, plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, and misuse of identification with intent to defraud or deceive.
All work submitted by students is expected to be the result of the students' individual thoughts, research, and self-expression. Whenever a student uses ideas, wording, or organization from another source, the source shall be appropriately acknowledged.
Students shall take special notice that the assignment of course grades is the responsibility of the students' individual professor. When the professor has reason to believe that an act of academic dishonesty has occurred, and before sanctions are imposed, the student shall be given informal notice and an opportunity to be heard by the professor. Any student determined by the professor to have been guilty of engaging in an act of academic dishonesty shall be liable to a range of academic penalties as determined by the professor which may include, but not be limited to, one or more of the following: loss of credit for an assignment, examination, or project; a reduction in the course grade; or a grade of "F" in the course. At the option of the professor, the campus provost may be furnished with written notification of the occurrence and the action taken. If such written notice is given, a copy shall be provided to the student.
Students guilty of engaging in a gross or flagrant act of academic dishonesty or repeated instances of academic dishonesty shall also be subject to administrative and /or disciplinary penalties which may include warning, probation, suspension and / or expulsion from the College.
The student may appeal action taken by the professor under the provisions of either Policy 6Hx28:10-13 or 6Hx28:10-15 as determined by the nature of the action taken.

**Student Code of Conduct**
Student Code of Classroom Conduct Policy Number: 6Hx28:10-18
Activities which disrupt classroom setting and which are in violation of this Student Code of Classroom Conduct are those which, with or without intent to do so, are disruptive of the essence of the educational process. Faculty members are authorized to define, communicate, and enforce appropriate standards of decorum in classrooms, offices, and other instructional areas under their supervision. In the case of the violation of the Student Code of Classroom Conduct, the faculty member may initiate personal conferences, verbal and written warnings, referral to the director of student services for counseling, and removal from the classroom pending disciplinary action under policy 6Hx28:10-04. Examples of such disruptive or distracting activities include, but are not limited to, the following:

* Activities that are inconsistent with commonly acceptable classroom behavior and which are not conducive to the learning experience, such as: tardiness, leaving and returning during class, and early departure when not previously authorized;
* Activities which violate previously prescribed classroom guidelines or constitute an unreasonable interruption of the learning process;
* Side discussions which are irrelevant to the subject matter of the class, that distract from the learning process, or impede, hinder, or inhibit the ability of other students to obtain the full benefit of the educational presentation; and,
* Utterances of "fighting words" or epithets directed specifically toward other persons with the purpose or effect of creating a hostile educational environment or which may reasonably be expected to incite imminent or immediate violence.

Violation of the Student Code of Classroom Conduct shall constitute grounds for student disciplinary action as provided in Policy 6Hx28:10-04.

 **Students with Disabilities**
Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (Winter Park Campus, Room 212, 407/ 582-6887).
 **Children on Campus**
we ask that you follow college policy relating to children on campus. Please make arrangements for childcare outside of classrooms or labs.

**Audible Alarms**please make note of evacuation route from you classroom in case of emergency. Interpret all audible alarms as valid and act accordingly.

**Disclaimer:**
The syllabus and course schedule may be changed at the discretion of the professor.

 Revised 5/4/2012