NARRATIVE FOR PROGRAM #0890 AMARILLO COLLEGE-RADIATION THERAPY

LETTER OF INTENT
PROPOSAL FOR FULLY ONLINE CURRICULUM DELIVERY IN
RADIATION THERAPY AT AMARILLO COLLEGE, PROGRAM #0890

Included Attachments:
- Sample Application for Master Course Development
- Best Practices for AC Online Courses
- Sample Course Completion Form for Master Course Development

SUMMARY:
- <u>Intent:</u> completely online delivery of all curriculum, including Clinicals.
- <u>Target date for complete implementation:</u> Fall 2015 for first incoming cohort
- <u>Implementation Progress:</u> Program has written online courses for 12 of the 17 "major" courses. All other General Education and Related courses are available online through the college.

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I.   INTRODUCTION
This narrative will serve as a rough outline for our program's proposal to be able to deliver the curriculum content to leave online with a target start date of Fall 2015, if feasible.

II.   PURPOSE AND RATIONALE FOR THE PROPOSED CHANGE
There are numerous factors that have influenced the decision to pursue a fully online radiation therapy program.

1, There has been a "glut" in the radiation therapy job market in recent years due, in no small part, to the influx of non-JRCERT accredited online radiation therapy programs. The program has a long history of student success (97% ARRT exam pass-rate during the 25 year tenure of the current Program Director), and has a fine reputation around the state. The Program feels

that an established, accredited online program would be beneficial to the field, and could set a precedent that could ultimately result in a diminishing influence of non-accredited distance programs.

2. The program is located in a relatively small and geographically isolated metropolitan area (the Amarillo area has a population of approximately 200,000). As a result, our program has few clinical sites available for student educational experiences. Due to the limited clinical space currently available, the program is not able to accept as many students as we need in order to maintain fiscal stability.

Additionally, clinical sites have been increasingly restricting student numbers they are willing to take, and clinicals have also begun to deny taking students at any time there is a renovation or equipment upgrade—time periods that typically last multiple semesters. These clinical circumstances have brought to the fore the high level of dependence the program has on the local clinics, and the tenuous nature of some of those relationships. Proceeding with online distance learning can allow the program to expand in a manner that would result in the program not being so completely dependent upon existing clinical resources.

The program is also currently restricted with respect to the number of clinical sites due to having only one full-time faculty. Adding additional clinical sites, thus increasing program viability, would necessitate adding full-time faculty. Fiscal restrictions currently contraindicate adding additional faculty unless the program can expand to increase student numbers. Again, the only way to accomplish this is to expand via moving to an online/distance curriculum.

3. Related to the previous rationale, the state of Texas has adopted minimum class graduation requirements (minimum numbers of program graduates) that must be met in order to receive state funding. The program is expected to have some severe difficulties meeting this minimum requirement (depending upon attrition in any given class, as well as local clinical availability) unless the program can expand. With online delivery, the Program hopes to enroll as many as 30 students per cohort (with additional faculty, as required—described later)

4. Online course delivery is certainly the trend for all colleges and universities. The program has been discussing and advocating in favor of online curriculum delivery for a number of years in the program Advisory Committee, and has had a very generalized goal of addressing and meeting this technological challenge for quite some time (long before any of the current clinical circumstances came into focus). While no formal votes have taken place in the Advisory Committee, there has been tacit acknowledgement that online delivery is the only viable mans to maintain the program in the long-term. The program will seek a formal vote during the Spring 2015 Advisory Committee meeting. The Program Director has education and experience in online and distance education, and is embracing the challenge of online curriculum delivery!

5. Amarillo College as an "open door" policy with respect to student acceptance. While we are limited in the number of students we can currently accept due to our clinical settings, we have a rich history of accepting students from a wide variety of backgrounds and settings. However,

there are various current program logistics that currently make it difficult for the program to accept radiographers into a shorter length program. Likewise, the program has to turn away the majority of applicants due to limited local clinical space. Moving to online delivery will make it easier for the program to engage in accepting registered radiographers as well as more of our more (historically) commonly seen students.

III.   <mark>FACULTY RESOURCES FOR ONLINE DELIVERY</mark>

Amarillo College and the radiation therapy program have a number of resources available to aid and assist in online course development and delivery. Indeed, as will be discussed, a number of courses have already been developed for online delivery (though only a couple have actually been implemented at this time).

III A.   The Center for Teaching and Learning (CTL)

Amarillo College has a dedicated staffed resource center, the Center for Teaching and Learning (CTL) to aid and assist faculty in online course development and delivery.
From the Amarillo College CTL web site, "*The Center for Teaching and Learning (CTL) is dedicated to supporting/advancing teaching and learning by working collaboratively with faculty, staff, administrators, and students to provide quality services, resources, and programs to improve the overall Amarillo College experience.*" While the CTL is available to faculty for a wide variety of needs, in actual practice, the CTL has been an online technology resource for faculty, and the Program Director has been a regular at CTL group and individual workshops and help sessions.

The CTL Center now (newly) encompasses the entire 2nd floor of the college library, and has numerous break-out labs and classrooms to assist faculty in online course development and delivery.

- The CTL home page can be found at http://www.actx.edu/ctl/index.php
- History and Development of the CTL center:
  http://www.actx.edu/ctl/index.php?module=article&id=192
- Organizational chart for CTL:
  http://www.actx.edu/ctl/index.php?module=article&id=160

More information regarding the CTL and its resources can be found in the links off of the CTL home page at http://www.actx.edu/ctl/index.php

The Radiation Therapy Program has made use of CTL resources numerous times already in developing online courses as well as learning more about the various online resources utilized by the college (BlackBoard, SoftChalk, etc.)

III B   BLACKBOARD

Amarillo College migrated to BlackBoard (Bb) Learning Management System (LMS) from Angel in Summer 2013, with ALL faculty having to navigate (at a bare minimum) student email and gradebook through the Bb portal starting Fall 2013. We were the beta testers for the newest

version of Bb, which has enormous capabilities. The migration has been painful and filled with bugs and pitfalls—such a migration typically takes 12-18 months, but we had to migrate in 6 months due to BlackBoard purchasing the LMS we had been using (Angel), and no longer giving support to Angel. Now into our 2nd full year of Bb, the program is running much more smoothly with only occasional hiccups along the way.

III C.   Faculty and prospective faculty

The Program currently includes a full-time Program Director and a part-time adjunct faculty (for facilitating labs). The Program recognizes that moving to an online offering will expand the number of clinical sites, resulting in the need for an additional full-time Clinical Coordinator.

The program already has a candidate for the position. Candy Habeger, RT(T), is currently a staff member at one of our clinical locations. She earned her Master's in Radiological Sciences from Mid-Western State University in 2012, and has expressed high interest in such a position (indeed, she did some student teaching with me in Fall 2011, and has kept in close contact with our educational program since that time, making it clear she is very interested in any faculty openings that might arise).

IV.   STUDENT RESOURCES
CTL services have developed extensive student tutorials, as well as being available for technical support for students that are having issues with online courses (see samples below found on the login page of our online LMS).

Smarthinking Online Tutoring

Smarthinking is an online tutoring service that **Amarillo College** is making available to all its students. Smarthinking provides tutoring in mathematics (basic math through Calculus, including Bilingual Math), Biology, Intro Human A & P, Chemistry, Organic Chemistry, Physics, Economics, Accounting, Intro to Finance, Statistics, Spanish, and Writing. Tutoring is available up to 24/7. Click here for a complete description of subjects offered and times when service is available.

With Smarthinking you can:

- **Connect With an e-structor** and interact with a live tutor.

- **Submit your Writing** for any class to their Online Writing Lab.

- **Submit a Question** and receive a reply from a tutor.

Getting Started

If you have not used SMARTHINKING before, click below to create your SMARTHINKING account.

Click Here to Create Your Account!   If you already have a SMARTHINKING account, you can sign-in below*.

Username:

Password:

Log In   Forgot Password?

*If this is your first time logging on this term, you will need to update your account. Click here for instructions.

Once you log in, use the SMARTHINKING Student Handbook for tips on navigating the website and using the service.

Technology Requirements and Troubleshooting Tips

Technology Requirements	Troub
- **OS:** Windows 98 +, Mac OS9 + - **Browser:** Windows: Netscape 6 +, Internet Explorer 5.01 +. **Apple Mac: Internet Explorer 5.0+ required.** - **Connection:** 28.8K min. / 56K+ preferred - **Cookies/Javascript** should be enabled. - **Popup Blockers?** Please disable all popup blockers for www.LEARNING.SMARTHINKING.com .	- - -

Additionally, each RADT (radiation therapy) course includes its own orientations, which serve as basic tutorials for students. (see folder image below, found in current BlackBoard course)
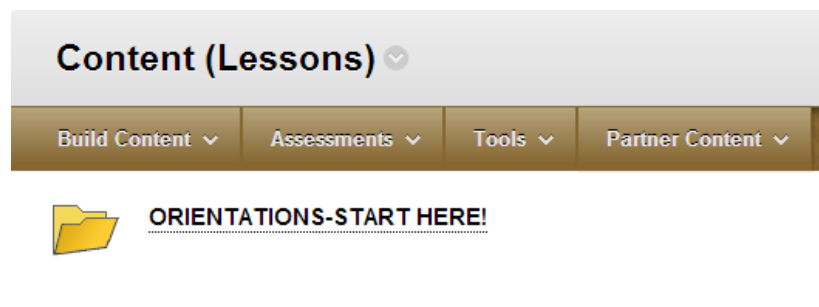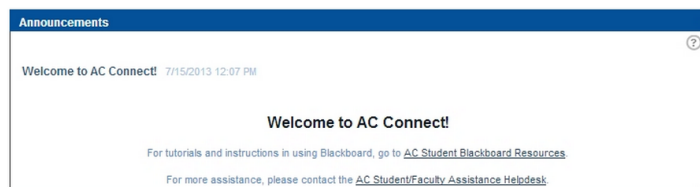

Radiation therapy course orientations **require** students (for a grade) to become familiar with many of the communication and other tools available through our online courses -- including requiring the students to participate in e-mail to the instructor, discussion boards, chat rooms, engage in a radiation therapy class private facebook group, and submit library drop box assignments. Students are given step-by-step instructions on how to use and submit samples from each of these tools.

Additionally, each RADT course details even more of the CTL resources available to students—including how to contact student technical support (the following Technical Support information is embedded in **all** RADT online and hybrid courses in the Orientations folder):

AC ONLINE ORIENTATION AND SUPPORT INFORMATION

If you need technical support or assistance with navigating AC Connect online classes, you can find our college-wide network of help when you first log in to any AC online class. The Help is found in the middle column when you first log in (see below...image is enlarged bit blurry).

Announcements

Welcome to AC Connect! 7/15/2013 12:07 PM

Welcome to AC Connect!

For tutorials and instructions in using Blackboard, go to AC Student Blackboard Resources.

For more assistance, please contact the AC Student/Faculty Assistance Helpdesk.

The AC Student Blackboard Resources link takes you to a web page on the AC website that includes numerous tutorials (including the basics of how to navigate through any AC online class, how to take a test in our online classes, how to submit assignments, etc.—incl of the skills described in this orientations section).

The AC Student/Faculty Assistance Helpdesk provides support contact information (as seen below)

The purpose of the Student & Faculty Help Center is to introduce and/or instruct students in the proper procedures to interact confidently with AC Online/AC Connect components or other software required for course assignments.

The services below are available to students who are currently enrolled in academic or continuing education courses on a walk-in/appointment basis or by phone:

- Logging-in to AC Connect, AC Online, WebAdvisor, myACcount and Google Apps
- Password resets
- How to use AC Connect and AC Online
- Microsoft Office
- General computer/software questions

Hours:
Monday – Thursday: 8:00 am - 9:00 pm
Friday: 8:00 am – 5:00 pm

Phone: (806) 371-5992 or (806) 371-5932

Location: Washington Street Campus, Library, Room 111

I HIGHLY recommend bookmarking these web pages and/or writing this contact information down, in case (at some point) you're unable to log in to AC Connect to get to your classes. Note: The above help is related to the basic navigation of how to do this or access that in AC Connect. If you have a question about the CONTENT of a particular class (not how to do something in teh online environment), then be sure to contact your instructor. Likewise, if you have a question about how to do this or that (e.g. how to get into an exam) then, while your instructor may be able to help (and these orientations will also help), you should probably contact the AC Support Team.

The remaining orientation activities will guide you through the other parts of the AC Online orientation (Discussion, drop boxes, taking tests, chat, etc. within the context of this course).

One of the great concerns for students taking academic classes online—especially skills classes-- is the question of whether or not they will miss out on some of the information that is contained in a face-to-face (f2f) lecture class.

For some background on how our program expects to address this concern:
Beginning in 1997, the Program Director began writing "Study Guides" that serve as textbook-like workbooks. Students follow the Study Guide during in-class lecture (faculty uses the Study Guide as a detailed lecture outline during in-class lecture), and students "fill in the blanks" created in the Study Guide workbook as the lecture proceeds (similar to, but generally more detailed than PowerPoint printouts with areas for students to write notes). In short, the Study Guide workbook tool enables the instructor to go much faster with lecture material, while students remain engaged by having to fill in the blanks during lecture time. This tool also allows the instructor to cover the material much more rapidly, enabling more time for student-centered activities to reinforce the lecture content. The Study Guide workbook tool has been praised by JRCERT Site Visitors over the past few accreditation site visits.
So, how does this relate to online coursework?

Several years ago a student asked the Program Director (the only current full-time faculty) what would happen if the Program Director fell seriously ill or was in a traumatic accident. Upon reflecting upon this possible scenario, the PD started digitally voice-recording and archiving all classroom lectures. This has been going on since 2008. Voice-recorded lectures follow the Study Guide lectures, just as in in-class lecture does the same.

Each year, as students ask questions over the lecture, the instructor has been going back into the Study Guide to insert lecture content to address the questions that might arise each year. Additionally, any time the instructor has had to make a chalkboard drawing to illustrate a point, the instructor has gone back and embedded a JPEG of the drawing into the Study Guide. Thus, each year, the Study Guides, and digitally recorded lectures, get increasingly more detailed and comprehensive.

This continual refining (and updating) of the Study Guide/lecture process has developed to the point that, for example, the instructor only had to insert one additional diagram during the entire 2012-2013 academic year. Thus, the Study Guides appear to be a tool that anticipates most any question that might arise. That said, online classes will use the Bb tool "Collaborate" (described in more detail later) to serve as a "virtual classroom" wherein students will be required to meet once/week in the virtual classroom to discuss any questions or uncertainties about course content. This virtual classroom will also allow the students to have regular audio/video interaction with the instructor.

This (current) technique of utilizing Study Guide workbooks for each class, combined with digital recordings of all lectures, has been used by the Program to allow students to receive lectures and not miss out on any content whenever the instructor is ill or out of town (e.g.

attending a professional conference). In such cases, the instructor uploads the lectures onto the course web site (every course has its own website regardless of whether or not it is offered as an online course), and students can download and listen to "podcasts" of the lectures on their home computer, laptop or even their iPod/mp3 player. The instructor then allows time during the next class meeting to go over questions related to the material content (how this communication will be addressed for online classes will be discussed in the next Section Heading).

The technique of podcasting lectures combined with Study Guide workbooks to guide the students through the lectures has proven to be very successful. Indeed, the majority of our current students are requesting that all lectures for all classes be put on podcast instead of having to come to class. This request is being denied, of course, as that would constitute too much of a significant program change at this point—but the technique has, in a sense, been vetted as an effective method of delivering course content during those times when the instructor is ill, etc., and is foreseen as a valuable tool for online/distance delivery of curriculum content.

V.   A.   FLIPPED CLASSROOM

Additionally, the PD has been experimenting with the "**Flipped Classroom**"* technique, wherein some class content is delivered via Study Guide/Podcast. When students meet for class, class time is filled with learning activities that reinforce the podcast lectures. This is sort of like having the students read ahead of time, then discussing the reading/engaging in activities related to the reading during class. This technique of "flipping" is already a hallmark of our online and hybrid classes and is expected to be a common theme in all of the online courses— wherein students will follow the Study Guide while listening to the podcast, then reinforce the lecture with learning activities--including discussion boards, chat, as well as crossword puzzles, flash cards, quizzes, and many other activities.

*Basic description of the Flipped Classroom: http://www.knewton.com/flipped-classroom/

V.   B.   SOFTCHALK
The Program currently uses **SoftChalk** software to develop online lessons embedded into Bb that provide a variety of reinforcing activities.

SoftChalk includes learning activity tools such as:
- crossword puzzle
- drag and drop
- quiz popper
- charts
- did you know?
- Flash card
- hotspot

- identify
- jigsaw puzzle
- labeling
- ordering
- pairs
- seek a word
- sorting
- slideshow
- and many others…

An example of a Section folder for an RADT online course, demonstrating tools such as Discussion, etc. can be found in the screen shot below from our QA online course:

📁 Podcasts: Section 4

🌐 QA Section 4 Online Lesson
This online lesson has multiple GRADED activities! Be sure to keep up with the activities, Check out the course calendar for due dates!

📁 Chat Area
Double-click into this folder to find your chat group area for the Section 4 Chat Activity.
DUE MARCH 12

📝 Critical Thinking Discussion Board
Note: You do NOT have to reply to other's posts, just your own post as directed in the Lesson
Initial post due 3-7, reply to self due 3-20

📝 Education Vs. Training Discussion
Note: You do NOT have to reply to other's posts, just your own post as directed in the Lesson
Initial post due 3-7, reply to self due 3-20

📝 TRAINING AND EDUCATION ASSIGNMENT
Your opinion: Are Radiation Therapy schools more inclined to "train" students or "educate" them?
You don't need to reply to any other student comments, just submit your own thoughts in writing here. You can either submit this as a Word doc. or just write in your thoughts in the spaces provided.
Due 3-23

📝 Flowchart Drop-box ✓
Note: you do NOT have to use the flow-chart creation software linked from the Lesson, but you DO have to find a way to submit a digital flowchart and upload it into this drop-box.

Institutional vetting of online courses

Quality and integrity in the development of any online course is monitored in part via a rigorous college approval process. Any proposed online course must be approved by the College CTL department, which includes the completion of a Master Course Development request form (see attached pdf "Application for Master Course Development") prior to commencing with the course development. Once the request has been approved, the faculty is assigned a supervisor/advisor from CTL that works with the faculty to help guide the course development process. Once the course has been written, but prior to final approval, faculty must review the course with their CTL advisor following guidelines and checklists helping to ensure high quality

(see attached pdf's "Best Practices for AC {Amarillo College} Online Courses" and "Course Completion Form for Master Course Development". The course must then be signed-off (approved) by the Dean of Health Sciences, as well as the CTL supervisor and Vice-President of the college.

V   C.   STUDENT/FACULTY DIDACTIC AND LAB COMMUNICATION

With respect to communication between faculty and students (e.g. questions regarding the lecture or other issues), it is expected that distance students will be required to "attend" a weekly scheduled "Seminar" using the _BlackBoard Collaborate_ tool. Bb Collaborate is a tool within Bb that allows for web-conferencing, virtual classrooms, mobile collaboration and more*.

*To see a sample of what Bb Collaborate can do, please see the following link: http://www.blackboard.com/platforms/collaborate/products/blackboard-collaborate.aspx

The details of what will take place during the Seminar* have not yet been fully mapped out, however it is expected that the seminar will be a weekly session wherein ALL online students (or groups no larger than 10 at a time, depending on class size) will 'meet' in a virtual environment to discuss any questions or concerns related to any class/lab/ and clinic.

*Seminar has not yet been used by the program, as the instructor has, up this point, simply been making time during f2f (face-to-face) classes for these kinds of discussion/activities related to online courses._

Additionally, instructors for online classes will have available "office hours" using Collaborate and Bb messaging where students can meet with instructors for individual assistance and help -- much like traditional faculty office hours.

Faculty will also schedule an individual meeting via Collaborate or Bb Messaging (or perhaps even Skype) with each and every student at least twice per long semester, and once per summer semester to discuss any individual issues or concerns.

V   D.   ONLINE COMMUNITY BUILDING

Research indicates that an important part of student success in distance and online classes is "community building. " That is, feeling like the student is a part of a class rather than just an individual that is, more or less, all on their own in cyberspace. This sense of student-centered belonging and community can be very helpful to students as a support mechanism and as a set of collaborative learning activities.

Students in our current online and hybrid classes engage in community building activities such as chat assignments and discussion boards that get students communicating and working with

each other in small groups or as a whole class. During the orientations, especially during the first semester of the program, discussion boards and chat assignments revolve around students getting to know each other—posting/commenting on biographies, etc.

The proposed Weekly Seminar can be used to build a sense of community as well.

One device used by the program for online and hybrid classes that has already been very helpful in building community is Facebook. In the very first semester of the program, students are required to join a closed, private Facebook group for students (they only join the group with their specific cohort). The groups are private, and no other FaceBook user can even find out that such groups exist.

Students are required to make a certain number of FaceBook posts at regular intervals, as well as make a certain number of required comments to other's posts during those intervals. One of the requirements is that student posts must NOT be related to schoolwork or direct clinical activities/assignments. In other words, the Facebook group is all about students getting to know each other through what is going on in their lives other than school (posting pics of their family, pets, talking about their roommate experience, etc.). Faculty post and comment as well.

One comment I received last year related to these community building exercises is that a student told me that they got to know their fellow students better in the online course than in our face-to-face courses (because they were forced to engage with each other on a personal level in the online courses, which doesn't always happen in class).

Note: one of the very first orientation activities is for students to sign off on the "netiquette" policy-- helping to ensure that students engage in respectful and appropriate online discourse.

VI.   LABORATORY CLASSES

The program currently has 3 semesters of labs taken during the first 3 semesters of the program.

Labs are expected to be treated in a manner similar to didactic classes with respect to the lecture portion of the lab—which will be facilitated by Study Guide/Podcast lecture format combined with SoftChalk learning activities to reinforce the lecture content.

Labs will also include video podcasts of demonstrations of various techniques (QA, Treatments, Sims, etc.). These videos have already been recorded.

Each clinical site will have a designated Clinical Supervisor that will additionally act as the lab facilitator. Students will review the online podcast lectures, watch any video demonstrations, and then-- after taking a quiz over the lab lecture material (including writing out the steps or creating a flow chart demonstrating the steps) for each setup--schedule to meet with the Clinical Supervisor to discuss and demonstrate techniques from each lesson. The detailed

specifics of this discussion/demonstrations have not yet been formulated, but may include a "mock" set up using a phantom or volunteer (perhaps even the clinical supervisor or another staff therapist).

VII.   CLINICALS

In principle, the program will seek to retain as much of the current rules/regs as is reasonable. In reviewing the program's current forms and policies, it is expected that the current forms that are used (timesheets, evaluation forms, competency forms, etc.) should be able to be applicable with minimal, if any, revision.

Certainly, the role of the Clinical Supervisor, as well as communication between program officials in the Distance student/Clinical Supervisor, will be vital.

Students will be required to attend on-campus orientation (this will be one of at least two times per student will be required to come to our on-site campus -- the other being for the comprehensive Exit Exams). The program currently requires approximately 12 hours of orientations to the college/program/clinicals (extensive review of rules/regs).

While we are quite familiar with our current clinical settings, it seems that a rigorous vetting process will need to be developed to ensure that expanded distance clinical sites will provide online students with an appropriate clinical experience.

While the program might be contacted by various distance clinical settings seeking to affiliate with our program, it is expected that it will be much more common for prospective students to contact our program, and that those prospective students will spearhead the pursuit of initiating contact with a prospective clinical affiliate. The program would then follow up with a questionnaire or other evaluation type of tool to assess the proposed clinical site's willingness and ability to affiliate with the program.

The following is a rough *draft* of proposed clinical affiliation items of concern (subject to revision):

- *Demonstrate Joint Commission or equivalent accreditation*
- *full-time oncologist(s)*
- *linear accelerator(s) with electron capabilities*
- *appropriate CT simulation equipment*
- *routine imaging (via port films, preferably via EIPD, IGRT, etc.)*
- *computerized treatment planning (3D or more advanced preferred)*
- *medical physicist available on site daily, or weekly to assist the student with physics questions/assignments*
- *patient load reflective of being able to meet the ARRT Competency Guideline necessary competencies with respect to numbers and varieties of procedures and cancer types. The*

majority of competencies must be completed with live patients on a treatment machine as opposed to a lab setting or even tomotherapy units.

- *Radiation therapy staff that is willing and able to provide support, guidance, and a positive learning environment for the student. This may be difficult if the department is short staffed or if staff is resistant to working with students.*
  - Clinical staff/Clinical Supervisors will be required to undergo a 1 hour orientation to clinical documents, rules/regs
  - Clinical staff/Clinical Supervisors will be required to undergo a 1 hour orientation to "Characteristics of an effective Clinical Instructor"
  - The two orientations described above are currently being developed—hopefully for ARRT approved CE credit
  - Clinical Supervisors will be required to meet via audio/video conferencing means with Clinical Coordinator and Program Director prior to student placement in clinical site in order to address any questions/concerns about the program/process.
- *Able to provide the students with the opportunity to observe, assistant/perform all aspects of radiation therapy including, but not limited to:*
  - ***nursing:*** *patient consults, status checks, follow-ups*
  - ***block room:*** *even if MLC is used for field shaping, custom block construction for photons and electrons beams is a required experience (but maybe simulated— e.g. constructed for a patient that is not currently being treated)*
  - ***Brachytherapy*** *(LDR or HDR)*
  - ***Special/modern procedures***: *IMRT, SRS/SRT, Mammosite or other HDR, IGRT, TBI, TSI, tomotherapy, etc.*
  - ***Treatment Room:*** *all aspects of treatment room activities and treatment delivery including patient education, patient setup, diode readings, imaging, image critique, new starts, emergency cases, chart review, scheduling, billing, etc. Direct Supervision, as defined in the program Clinical Handbook, must be adhered to at all times.*
  - ***Dosimetry:*** *students must complete competencies related to the completion of basic calculations and computer-generated plans, as per ARRT requirements*
  - ***Tumor Board/Chart Rounds:*** *students will be required to attend any regular clinical team meetings, such as Tumor Board and Chart Rounds.*
  - ***Quality Assurance Procedures:*** *students will be required to perform morning QA procedures(with Direct Supervision) as well as observe/participate in at least one routine full calibration with the physicist.*
  - ***Additional Educational opportunities***: *rotational experiences through areas such as Medical Records, Nutritional Services, Oncology Nursing, Chemotherapy (if available), Reception/Front Desk, Social Work, etc.*
- *The clinical facility must designate a* ***Clinical Supervisor***: *A registered staff therapist (staff RTT, Chief Therapist, Department Director, etc.) willing and able to commit time to be a source of support, guidance, and feedback for the student (estimated release time of appr. 2 hours/week during initial semesters, 1 hour/week during last two semesters). This includes coordinating (with guidance from the Clinical Coordinator) rotations within*

the clinical area(s) for the student(s), coordinating paperwork such as collecting/collating routine performance evaluations, verifying timesheets*, communicating with the program Clinical Coordinator, regarding the Students Clinical Behavior, Professionalism, Communication, and Technical Skills, as well as working with student on lab skills during the semesters where the student is enrolled in a laboratory course. In some cases, the Clinical Supervisor might be required to serve as an exam Proctor for the student. These responsibilities may be shared with other therapists as designated or assigned, but are the primary responsibility-- at least with respect to coordination-- of the clinical supervisor.

- **The program is currently investigating the future use of paperless records (digital evals, time sheets, immunization records, etc…pretty much everything online, and available for use by students/clinical staff with desktop computers, tablets and smart phones). Paperless clinical records are expected to be utilized by the time the program goes online (and are currently being utilized in our institution's radiography program…we're waiting for them to work out the bugs this academic year before we institute the requirement.*

<mark>The above will be reformatted into a survey/questionnaire completed by the proposed clinical affiliate.</mark>

Additionally, the proposed clinical affiliate will agree to the following (again, this is just a draft) regarding the position of the Clinical Supervisor:

- *The clinical supervisor is responsible for the clinical education and evaluation of the students assigned to the clinical education facility. The student can and should work with a variety of registered therapists so that the responsibility of the student's education is not completely on the Clinical Supervisor. Students should rotate to all available treatment and ancillary areas, whether the clinical supervisor is currently located in that area or not. More on this will be found in the Clinical Supervisor Handbook (to be written into the Handbook once online delivery commences).*
- *At all times students should be under the Direct Supervision of a registered radiation therapist (Direct Supervision is defined in the student Clinical Handbook). Students are never to be used as staff were considered as staffing relief.*
- *Clinical Supervisor/Instructor qualifications:*
    - *registered in radiation therapy by the ARRT*
    - *valid state or other license where applicable*
    - *minimum of two years experience as a registered therapist*
- *Clinical Supervisor responsibilities include*
    - *student instruction and supervision*
    - *evaluation of student progress (by direct evaluation as a supervising therapist and/or by reviewing evaluations of other therapists)*
    - *reporting of student progress (evaluations and timesheets) to the program*
    - *provide students with regular scheduled feedback*

- *provides scheduled learning opportunities if a student asks for additional clarification*
- *familiarity with program goals and clinical objectives, rules/regs (to include orientation to the program and Clinical Supervisor Handbook)*
- *provide clinical staff within the department the means to be familiar with program goals and clinical objectives, rules/regs.*
- *provide any new staff therapist with an orientation to the education program (via program orientation initiatives)*
- *serve as a liaison between the program faculty and the clinical staff*
- *follow grievance procedures 'chain of command' when necessary)*
- *provide student counseling when needed, with documentation of any counseling given (using tools provided by the program) and report any occurrences to the program (typically, Clinical Coordinator and then Program Director if necessary).*
- *Provide clinical staff with the opportunity for suggestions regarding program goals and clinical objectives*

The program is currently in the process of seeking advice/ideas relating to clinical logistics from other JRCERT accredited distance programs. The program is also interested in methods/tools by which the application process might possibly be amended to become more suitable to those prospective students that are more inclined towards being a successful online student. Orientations (as well as application packets) will certainly be amended to include information relating to aptitudes related to more independent and self-disciplined learning—as is typically helpful for online students.

VIII.   EXAMS/ TESTING SECURITY

Currently, for an online class (and occasionally for a f2f class), students are required to come to our campus computer lab for testing. We have access to BlackBoard LockDown Browser (not only on-campus, but available for any distance student as well). LockDown Browser is a custom browser that locks down the testing environment within Blackboard. When students open a test or quiz, they are unable to print, copy, go to another URL, or access other applications. When an assessment is started, students are locked into it until they submit it for grading (applies to Mac and PC).

The Program also utilizes Respondus Monitor for online test security. From the Respondus Monitor Website https://www.respondus.com/products/monitor/

Respondus Monitor® is a companion product for **LockDown Browser**that enables institutions to protect the integrity of non-proctored, online exams.

Students use their own computer and a webcam to record assessment sessions, all without leaving the institution's learning management system.

How It Works

- Students start LockDown Browser, log into the LMS and complete a brief startup sequence prior to the exam
- The student and the surrounding environment are recorded during the entire exam
- Instructors can quickly review details of the assessment, and even watch the recorded video

Why It Works

- Cheating is deterred with a low-hassle, easy-to-use system
- Students appreciate a level playing field and the ability to take exams anytime
- Administrators ensure student identity and exam integrity in distance learning environments

Final Exams at the end of each semester must take place at an approved proctored site (such as a willing library, community college or other testing center.

Each regular exam will contain a statement of ethics wherein each student will sign-off on not cheating, as well as reporting any incidence of cheating of which they might become aware. Research (especially from U. Virginia) demonstrates that regular reminders about the importance of academic integrity result in decreased incidences of cheating.

In order to further address security/integrity concerns, grading scales will be adjusted for online classes to put more emphasis on the comprehensive Final Exams—which, regardless of how regular Section exams will be approached with respect to security, WILL be proctored by an external agency.

Program Comprehensive Exit Exams (capstone exams at the end of the program) must be taken in-person on our local campus.

Many of the structural logistics related to effective online delivery are already well underway or implemented in our existing online courses. Though only 3 "major" courses are currently being delivered via online means, 14 of the 17 "major" courses have already been written for online delivery.

Highlighted courses (below) have been written and approved by CTL for online delivery

Major Course Requirements (43 Semester Hours)

- RADT 1142 - Quality Assurance in Radiation Therapy
- RADT 1205 - Technical Procedures I
- RADT 1246 - Technical Procedures II
- RADT 1266 - Practicum I
- RADT 1267 - Practicum II

- RADT 1271 - Technology Research
- RADT 1191 - ST - Ethics and Law in Radiation Therapy
- RADT 1401 - Introduction to Radiation Therapy
- RADT 2266 - Practicum III
- RADT 2271 - Technical Procedures III
- RADT 2366 - Practicum V
- RADT 2367 - Practicum IV
- RADT 2401 - Oncology I
- RADT 2403 - Oncology II
- RADT 2407 - Dosimetry I
- RADT 2309 - Dosimetry II
- RADR 2240 - Sectional Anatomy for Medical Imaging

IX.   POTENTIAL OBSTACLES TO IMPLEMENTATION:

1. Budget.

Amarillo College has seen substantial budgetary cuts as the state of Texas has been making significant cuts to community college budgets for the last several years. The College has stated in general terms within the college community that adding faculty will be met with the highest scrutiny. That said, the Program Director won a Faculty Excellence Award Fall 2014 for his work in developing online curriculum. It seems it would be inconsistent for the institution to give such an award and not let the program implement the curriculum that it has spent the last few years devoting resources and stipends to faculty to develop. Informal conversations with the Dean of Health Sciences have suggested that budgetary approval for the required faculty will be accepted.

The Dean has advised the Program Director to budget for a Clinical Coordinator position for Fall 2015.

2. Program Promotion

Ideas for program promotion, to advertise the program/online curriculum, will be solicited during the Spring 2015 Advisory Committee meeting and expected subsequent meetings with officials within and beyond the Institution.

It is expected that existing radiography programs (especially if those institutions without current radiation therapy programs can be teased-out), and/or hospitals with radiography departments in areas not located close to a radiation therapy program, will be targeted for promotion—likely primarily email announcement with flyer.

3. Finding Faculty for Clinical Supervisor position

As mentioned earlier, a qualified local candidate has already expressed adamant interest in the position. Additionally, the program has been contacted by another qualified candidate (living in the upper Mid-West), that has expressed interest in any available faculty positions. Once advertised nation-wide, the program expects that applications for the position will not be a problem.

In spite of these potential obstacles, the Program feels confident that it has the resources and tools available to implement an effective curriculum in radiation therapy, and, with many of the bugs worked out and most program courses already being ready for online delivery, the program is well underway to being ready to implement these substantive changes in the near future.

Comments and critiques (and, perhaps above all, suggestions) from the JRCERT are welcome and invited!

Sincerely,

Tony Tackitt, M.Ed., RT(T)
Program Director (program #0890)
Amarillo College -- Radiation Therapy
PO Box 447
Amarillo, TX 79178
806-354-6063
Fax: 806-354-6076
tmtackitt@actx.edu