

## Guided Career Paths in Clinical Laboratory Science

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### Learning Objectives

- Compare curriculum design, adaptations, and competency based educational methods to align with clinical laboratory science professions guided career pathways
- Describe the use of a guided career pathway to increase the recruitment of students into CLS programs and continuum of career path from community colleges and 4 year universities to undergraduate and graduate CLS programs
- Summarize the development of programs for retention and academic individualized support, including advising strategies to assist students in achieving their next level educational goals

### General Overview

- **Medical Laboratory Science Profession**
- **Educational Environment**
  - Technology
  - Interprofessional Education
  - Simulations
- **Career Pathway**
  - Guiding and advising
  - Visibility
- **Entry and Exit Paths**



Clinical Lab/Bench



Sales



Administration/Management



Education

### Guided Career Pathway

#### Educational pathways

- Associate Degree-Level Instruction or Associate Degree attainment to Baccalaureate Degree (A to B)
- Associate to Master's Degree (A to M)
- Associate to Doctoral Degree (A to D)

#### Focus on improving matriculation

- Seamless transition
- Clarity and Guidance
- Recruitment strategies

### Career Map

- Focus on end-product and external expectations (i.e. employers)
- Measureable behaviors that:
  - inform learners on expectations
  - evaluate against set standards
- Result in a CLS degree and Certification (ASCP-BOC)
- Entry and Exit Paths



American Society for Clinical Laboratory Science Task Group. Document: Practice Levels and Educational Needs for Clinical Laboratory Personnel Classification. Position Paper. July 23, 2009. <http://www.ascp.org/position-papers/173/levels-of-practice-173/levels-of-practice>. Accessed February 3, 2016.

## Rutgers, The State University of New Jersey School of Health Professions

### Department of Clinical Laboratory and Medical Imaging Sciences

## Fast Facts Post Baccalaureate Enrollment

(National Center for Education Statistics. <https://nces.ed.gov/fastfacts/display.asp?id=372>)

### Fall 2015

- 2.9 million in degree programs, master's doctorate, law, medicine, dentistry, others
- 1.7 million full-time students and 1.3 million part-time students.
- 2000-2015, full-time enrollment increased at a faster rate (55%) vs part-time (17%).

### Projections 2015-2026:

- Increase by 12 percent from 2.9 million to 3.3 million students.
- Part-time enrollment is projected to increase at a faster rate (14%) vs full-time (10%)

### Distance Education- flexible learning opportunities to post baccalaureate students.

- Fall 2015: more than one-third (1.0 million) participated in distance education
  - 769,000 students(26%), exclusively taking distance education
  - 322,000 enrolled at institutions in the state they resided
  - 414,000 enrolled at institutions in a different state.
- Percentage of students who did not take any distance education courses
  - Five times higher for those enrolled at public (72%) and private nonprofit (70%) institutions vs private for-profit institutions (14%).

## Meeting Student Needs - It's All About Choices!

### Phlebotomy Certificate Program

#### Undergraduate Program Entry Routes:

#### BS-CLS: FT & PT Options

- Joint Baccalaureate Degree – 11 collaborating colleges and universities in NJ
- Second Baccalaureate Degree- awarded by Rutgers University
  - BS degree with basic science prerequisite from US accredited institution

#### Rutgers- School of Health Professions Certificate in CLS

- US equivalent foreign degree, basic science prerequisite, FT & PT options

#### Discipline Specific Certificate Option - 12 month, PT

- Degree from a foreign country equivalent to a US BS, prerequisite basic science requirements
- Chemistry, Microbiology, Hematology/Urinalysis, Immunohematology/Immunology

#### Future?..... Entry Level MS in CLS

#### MS-CLS Cytopathology Track:

- Entry Level and Post Professional Options

#### Graduate Program Entry Routes

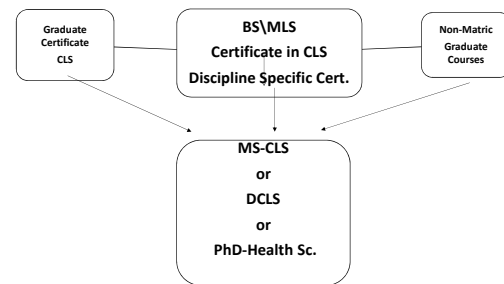
#### Non-Matriculated Students- max. 12 credits

#### Graduate Certificate in CLS: 12 credits

#### MS-CLS: BS degree, MLS/MLT(ASCP), FT & PT options

#### DCLS: MLS ASCP™ FT & PT options didactic and FT residency year (3 semesters)

## Educational Pathways-Graduate Programs



## Recruitment Strategies

- **BS-MLS Collaborations**
  - On-campus Outreach
- **Graduate Programs**
  - Current BS-MLS Students
  - BS-MLS & MS-CLS Alumni
- **Recruitment Strategies**
  - Collaborate with School Enrollment Management & Marketing Team
    - Website – new “look” launching soon!
    - School Virtual “Open House”
    - Outreach to targeted website “hits”
    - E-mail recruitment – professional organizations email lists
  - ASCLS Program Directories
  - Alumni – “spread the word”
  - Responding to personal inquires- email, phone
  - Social Media

## Recruitment

### It's All About Choices and.....Balance!

#### Students

- Working Professionals seeking advanced education
  - Balance – professional, academic and personal responsibilities
  - Past education (“traditional” on campus vs. online)

#### Flexibility

- FT vs PT
  - FT Graduate Education- 9 credits/semester (3 courses)
    - 9-12 hr/wk per course

#### Routes of entry:

- Non-matriculated student- up to 12 credits
- Graduate Certificate in CLS - non-matric 12 credits; awarded certificate
- MS-CLS – 33 credits
- DCLS – 80 credits

### Developing an Individualized Guided Career Pathway It's All About Choices and.....Balance!

- **Personalized Advisement**
  - Career Goals - Student's Reflective Assessment
    - Where do you want to be and what do you want to do in 5, 10, 15 years
      - Professional and Personal life
      - BALANCE!
- **Customize education program**
  - Core required courses – CLSC and non-CLSC (IPE)
  - CLSC & Non-CLSC elective
  - Transfer credit
  - Portfolio assessment – credit for life experience
- **Faculty Adviser/Mentor**
  - Curriculum plan to meet career goals
  - Review each semester – Student Tracking Form –
    - Video conferencing, phone, email

### MS-CLS/DCLS Co-Curriculum

#### PORTFOLIO

- Encourages and promotes students to grow as a professional.
- Essential for the practicing MLS at all levels.
- Demonstration of professional growth through activities in
  - Professional organizations,
  - School and work-related leadership activities,
  - Scholarship
  - Mentoring

### MS-CLS/DCLS Co-Curriculum

- **Background:**
  - Resume or CV; Professional Memberships & leadership roles
- **Academic Progress:**
  - Transcripts or Student Tracking Form; Samples of work (i.e. a course major capstone project/paper, PPT presentation, etc.)
- **Professional Feedback:**
  - Personal/professional mission statement; Tracking Form
- **Extracurricular Activities:**
  - Service, Volunteer, Extra-curricular activities
- **Teaching /Mentorship:**
  - Teaching Examples (if applicable); Participation in Mentorship Program ( i.e. ASCLS Mentorship program, others)
- **Awards/Recognition:**
  - Awards and Scholarships
- **Continuing Competence:**
  - Transcript of current ASCLS PACE Transcript or ASCP (BOC) CE Transcript; other courses taken that do not appear on official CE transcripts; Professional volunteer activities
- **Scholarly Work:**
  - Publications, Other scholarly work (poster, oral presentations)

### Retention It's All About Choices and.....Balance!

“The best-laid plans of mice and men often go awry”

adapted from a line in "To a Mouse," by Robert Burns

No matter how well you plan – something can go wrong because.....

**LIFE HAPPENS!**

#### Choices to help balance:

Faculty Advisor in collaboration with PD:

- Monitor student progress: two –way communication with course faculty
- Discuss issues with student; offer options and revise curriculum plan
  - Request Incomplete; LOA
  - Revise Curriculum Plan – career goals, professional & personal life commitments
- School Support Services:
  - Academic Success Workshop Series
  - Tutors, online counseling, disability, legal, etc.

### Assessment

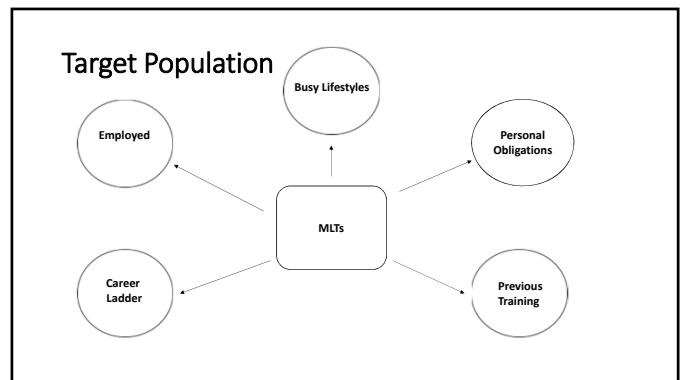
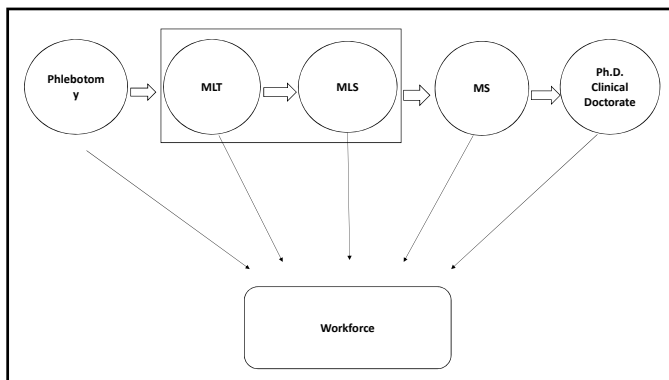
- **Students:**
  - Faculty Advisor, PD, communication with course faculty
  - Curriculum: Course/faculty evaluations
- **Annual Program Outcomes**
  - Course Instructor Assessment of benchmarks based on course objectives/competencies
  - Program learning outcomes & competencies
  - School wide learning outcomes/competencies
- **Advisory Committee**

## Department of Clinical Laboratory Sciences

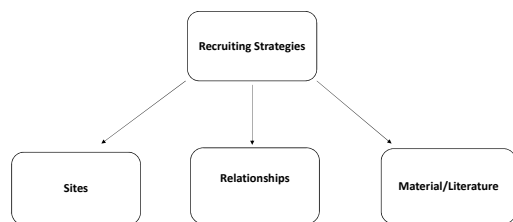
School of Allied Health Professions  
Virginia Commonwealth University  
Richmond, VA

### Programs Offered at VCU

- **BS in Clinical Laboratory Sciences**
  - Traditional (2+2)
  - **BS Degree Completion Program for certified MLTs (distance based)**
- **MS in Clinical Laboratory Sciences**
  - Advanced (BS in CLS)
  - Categorical (BS in Biology or Chemistry)
    - Microbiology, Chemistry, Hematology, Immunohematology
  - Accelerated
    - BS and MS in CLS (3 years)
- **Ph.D. in Health Related Sciences**
  - CLS track

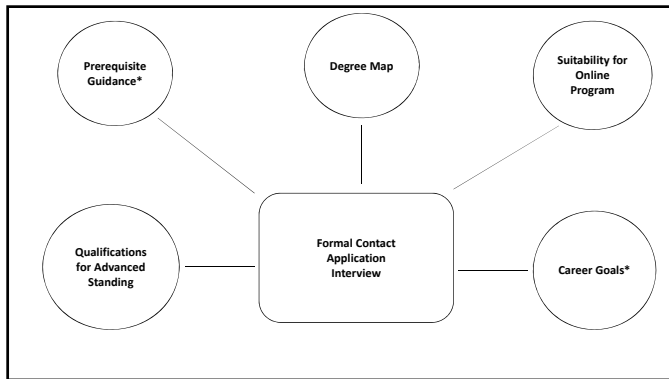


### VCU BS Degree Completion Program



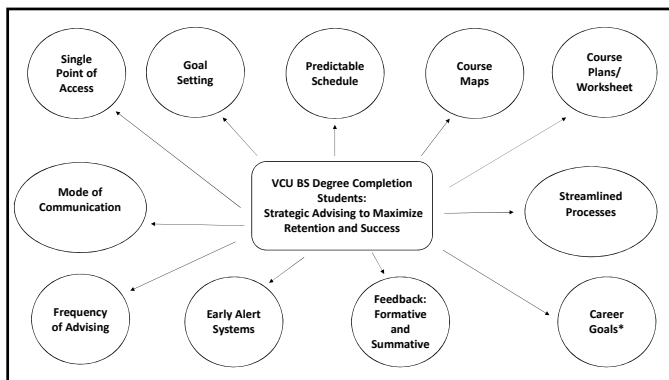
### VCU BS Degree Completion Program Curricular Adaptations

- Certified MLTs
- Full-time/Part-time option
- Didactic courses online
- Exemptions (11 credits)
  - Junior level laboratory sessions
  - Phlebotomy
- Advanced standing for clinical rotations (15 credits)
  - Clinical Qualifying Exam
- Challenge exams (≤ 8 credits)



### VCU BS Degree Completion Program Course of Study

- 65 credits obtained through formal coursework or proficiency
  - Hematology
  - Chemistry and Instrumentation
  - Microbiology
  - Immunohematology
  - Immunology
  - Urine and Body Fluid Analysis
  - Education Management
  - Senior Seminar



### BS Degree Completion Program

- Graduation Rates
- BOC Pass Rate
- Exit Survey
- Alumni Survey
- Employer Survey

### Accelerated MS in CLS

- Integrates undergraduate and graduate coursework that leads to the awarding of a BS and MS Degree simultaneously
- Students must initially qualify for the Bachelor of Science program
- Minimum GPA of 3.0 for CLS undergraduate coursework (52.5 credits), completion of GRE, and interview are required for admission to the graduate portion of the curriculum
- Curriculum
  - BS: see BS curriculum outlined previously
  - MS (min 40 credits): Graduate courses in Hematology, Blood Bank, Chemistry, Microbiology, Education/Management, Management/Business, Statistics, Graduate seminar, Research Methodology, Research credit, and electives (can be combination of science, education, management, or business); Research project is required for completion of the program

### Ph.D. in Health Related Sciences

- School of Allied Health Professions, VCU, CLS Track
- Teaching, research, administration positions
- Emphasizes distance learning technologies
  - Hybrid program
- Interdisciplinary curriculum

## Ph.D. in Health Related Sciences

- 51 credit hours
  - 18 credits of common interdisciplinary core courses
  - 12 credit hours of research methods core courses
  - 9 credit hours of concentration courses
  - 12 credit hours of dissertation research
  - 2 comprehensive examinations
  - Research proposal defense
  - Final dissertation defense

## Department of Clinical Laboratory Sciences

School of Health Professions  
University of Texas Medical Branch  
Galveston, Texas

## The University of Texas Medical Branch

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>• <b>BSCLS</b> <ul style="list-style-type: none"> <li>• Regular track</li> <li>• Part-time</li> <li>• Alternate track</li> <li>• Hybrid</li> </ul> </li> <li>• <b>LEAP</b> <ul style="list-style-type: none"> <li>• Lab Education and Advancement Program</li> <li>• Regular</li> <li>• Accelerated</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>Categorical cert</b> <ul style="list-style-type: none"> <li>• Chemistry</li> <li>• Hematology</li> <li>• Immunology</li> <li>• Microbiology</li> <li>• Heme+Chem</li> </ul> </li> <li>• <b>3+2 B MSCLS</b> <ul style="list-style-type: none"> <li>• Regular track</li> <li>• Part-time</li> <li>• Alternate track</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• <b>MSCLS</b> <ul style="list-style-type: none"> <li>• Certified graduates (Online)</li> <li>• Science graduates (Hybrid)</li> </ul> </li> <li>• <b>DCLS</b> <ul style="list-style-type: none"> <li>• Regular track</li> <li>• Part-time</li> <li>• Didactic (Online)</li> <li>• Clinicals (F2F)</li> </ul> </li> </ul> |
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## Partnerships

- **Advisory Board**
  - Education and Employer partners
  - Advisement on Competency Model and Guided Career Pathway
- **Education Partners**
  - Established MLT programs
  - Basic health occupations
  - Articulation agreements and transfer plans
- **Employer Partners**
  - Clinical rotations (academic and occupational skills)
  - Define career pathway
  - Establish or revalidate required competencies for each level

## Guided Career Pathway - Recruitment

- 1) Recruitment – Targeted recruitment
  - Pre-matriculation
  - Matriculation
- 2) Academic Advising
- 3) Individualized Transfer Plans (ITPs)
- 4) Competency Assessments
- 5) Program Orientation

## Program for Retention and Academic Individualized Support (PRAIS) - Retention

- Academic and Non-Academic skills workshops
  - Goal setting, test taking strategies
- Peer Tutoring
  - On-going structured events
- Early Alert systems
- Monitoring – at risk students,
- Retention – career map success rate

### Summary

- Student profile:
  - professional experience, past education experiences
- Recruitment Strategies
- Career Goals – selecting entry & exit paths
- Customized Curriculum – entry & exit paths
- Degree Options
- Personal Individualized Advisement – early & often
- Multiple Support Resources: individual, program, school

### References

- American Society for Clinical Laboratory Science Task Group. Document: Practice Levels and Educational Needs for Clinical Laboratory Personnel Classification: Position Paper. July 25, 2009. <http://www.ascls.org/position-papers/173-levels-of-practice/135-levels-of-practice>. Accessed February 3, 2016.
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