New Quillen Curriculum

TRAILS

Team-based Rural Applied Integrated Learning System
ETSU Quillen COM TRAILS Curriculum Schematic

Pre-clerkship Phase

Year 1
- EQUAL Pref Immersion
- Foundations of Medical Knowledge: 13 weeks
- Immuno/Heme: 6 weeks
- Cardiovascular/Pulmonary/Renal: 14 weeks
- GI/Nutrition: 5 weeks
- Spring Break
- Break: 9 weeks

Year 2
- Brain, Body, Behavior: 13 weeks
- Endo/Repro: 6 weeks
- Step 1 Study: 6 weeks
- Trans to CC & Adv Basic Science
- Core Clerkships: Family Medicine, Internal Medicine, OB/GYN
  Pediatrics, Psychiatry, Surgery
  Underserved Medicine

Year 3
- Core Clerkships: Family Medicine, Internal Medicine, OB/GYN
  Pediatrics, Psychiatry, Surgery
  Underserved Medicine
- Step 2 Study: 4 weeks
- Electives (22 weeks)
- Selectives: (Sub-internship 4 weeks, Critical Care 2 weeks, Ambulatory 2 weeks)

Year 4
- Selectives: (Sub-internship 4 weeks, Critical Care 2 weeks, Ambulatory 2 weeks)
- Electives (22 weeks)
- Keystone Course: 3 wks
- Break
- Graduation
# TRAILS Course Directors and Co-Directors

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Director</th>
<th>Co-Director</th>
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</thead>
<tbody>
<tr>
<td>EQUAL Professional Immersion</td>
<td>Caroline Abercrombie, MD</td>
<td>Deidre Pierce, MD</td>
</tr>
<tr>
<td>Foundations of Medical Knowledge</td>
<td>Antonio Rusinol, PhD</td>
<td>Michelle Chandley, PhD</td>
</tr>
<tr>
<td>Immunology &amp; Hematology</td>
<td>Russ Hayman, PhD</td>
<td>Bob Means, MD</td>
</tr>
<tr>
<td>Cardiovascular, Pulmonary, &amp; Renal</td>
<td>Jerry Mullersman, MD</td>
<td>Doug Thewke, PhD</td>
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<tr>
<td>Gastrointestinal Systems &amp; Nutrition</td>
<td>Bob Acuff, PhD</td>
<td>Russ Hayman, PhD</td>
</tr>
<tr>
<td>Endocrinology &amp; Reproduction</td>
<td>Tom Ecay, PhD</td>
<td>TBD</td>
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<tr>
<td>Brain, Body, &amp; Behavior</td>
<td>Diego Rodriguez-Gil, PhD</td>
<td>Regenia Campbell, PhD</td>
</tr>
<tr>
<td>Doctoring TRAILS: Walk One</td>
<td>Jerry Mullersman, MD</td>
<td>N/A</td>
</tr>
<tr>
<td>Doctoring TRAILS: Tour Two</td>
<td>Patti Amadio, MD</td>
<td>N/A</td>
</tr>
<tr>
<td>Doctoring TRAILS: Trek Three</td>
<td>Patti Amadio, MD</td>
<td>N/A</td>
</tr>
<tr>
<td>BRIDGE to Clinical Clerkship</td>
<td>Caroline Abercrombie, MD</td>
<td>Rob Schoborg, PhD</td>
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</tbody>
</table>
Instruction: Active Learning

Traditional Model

- Remember
- Understand
- Apply
- Analyze
- Evaluate
- Create

Students are expected to achieve these levels on their own outside of the classroom.
New information is conveyed through passive didactics.

Active-learning Model

- Various formats of interaction promote discussion and application of learned material, responsive to individual levels of understanding.
- New information acquisition is self-directed, with aids.

TRAILS
# Example Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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</thead>
<tbody>
<tr>
<td>8:00-8:50</td>
<td>TBL</td>
<td>SDST</td>
<td>TBL</td>
<td>Human Structure: (Anatomy, Embryology, Histology)¹</td>
<td>IQ Case or Doctoring: SPECTRM²</td>
</tr>
<tr>
<td>9:00-9:50</td>
<td></td>
<td>SDST</td>
<td></td>
<td>Simulation or other course sessions</td>
<td>TBL</td>
</tr>
<tr>
<td>10:00-10:50</td>
<td>Interactive Large Group</td>
<td>Interactive Large Group</td>
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<tr>
<td>11:00-11:50</td>
<td>Interactive Large Group</td>
<td>Interactive Large Group</td>
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<tr>
<td>12:00-12:50</td>
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<tr>
<td>1:00-1:50</td>
<td>SDST</td>
<td></td>
<td>Doctoring: Clinical Preceptor</td>
<td>Learning Community Activity (~every 4-6 weeks)</td>
<td>SDST</td>
</tr>
<tr>
<td>2:00-2:50</td>
<td></td>
<td></td>
<td></td>
<td>Doctoring: Clinical Skills</td>
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<tr>
<td>3:00-3:50</td>
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<tr>
<td>4:00-4:50</td>
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</tbody>
</table>

¹ Human Structure every week during Foundations; every 2-3 weeks during systems courses

² SPECTRM: System, Professional, Ethical, and Community Topics Relevant to Medicine
Assessment

• Assessment *for* learning
• Continuous, progressive, cumulative
• Small stakes leading to larger stakes

• Daily Activities
  • [TBL grade (Quizzes, Application etc.), JiTT Clicker responses, etc.]
• Weekly Assessments
• Mid-Term (for longer courses)
• Final Exam
Remediation

- M1: Remediate during the summer break
- M2: Remediate prior to beginning clerkships

Possible Approaches:
- Course director submits plan to Student Promotions Committee
  - Tailored to student based on performance
- Reviewing current policy around failure, remediation, and re-takes
  - More info coming soon!
Fall Semester Courses
EQUAL Professional Immersion

- Experiencing
- Quillen,
- Underserved
- Appalachia, &
- Learning Communities
GOALS

• Introduce **people and resources** available at Quillen and in the community.
• Engage with student’s **Learning Community**.
• Introduce course themes as **lenses for perspective**.
• Model the **schedule and learning environments** for a typical week.
• Provide opportunity to reflect on the **identity and expectations** of a professional.
• Introduce what it means to be a **patient in Appalachia**.
• Introduce “**doctoring” skills** and the simulation learning environment.
# EQUAL Professional Immersion “Lenses”

<table>
<thead>
<tr>
<th>Course Themes</th>
<th>Example Sessions</th>
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<tbody>
<tr>
<td>Community Health</td>
<td>TN Vital Signs &amp; SDoH through the Lens of Appalachia</td>
</tr>
<tr>
<td>Patient Inclusivity</td>
<td>Introduction to Intersectionality</td>
</tr>
<tr>
<td>Patient Advocacy</td>
<td>EQUAL Patient Centered Care</td>
</tr>
<tr>
<td>Patient Safety</td>
<td>Naloxone Certification Training</td>
</tr>
<tr>
<td>Experiential / Active Learning Environment</td>
<td>BLS Training; Passport to Learning: TBL</td>
</tr>
<tr>
<td>Learning Community Identity</td>
<td>Meet your Trail</td>
</tr>
</tbody>
</table>
Growth & Professional Development: Personal, Social, & Professional Identities
Foundations of Medical Knowledge (FMK)

- 13 Weeks
- Incorporates fundamental aspects of all basic science disciplines
- Active Learning Sessions
  - Team Based Learning: ~50%
  - Problem Based Learning: ~10%
  - Just in Time Teaching (JiTT): ~30%
- Traditional Lectures: <10%

Small group
Large group
Weekly Themes in FMK

1. Human Development
2. Building Blocks of Life
3. Genetics, Cell Division and Signaling
4. Physiological Functions
5. Foundations of Human Metabolism + Mid Term
6. Fall Break
7. Energy Production and Utilization
8. Cause, Origin, and Nature of Disease
9. Control of Bodily Functions
10. Foundations of Microbiology/Antimicrobials
11. Foundations of Immunity
12. Microbial Pathogenesis and Treatment
13. Final Exam Week
Teaching Faculty

Course Director: Antonio Rusiñol  Co-Director: Michelle Chandley

• Douglas Thewke
• David Johnson
• Paul Monaco
• Thomas Ecay
• Earl Brown
• Diego Rodriguez-Gil
• Robert Schoborg
• Jennifer Hall
• Michael Kruppa

• Kelly Karpa
• Jerald Mullersman

Anatomy & Embryology

• Thomas Kwasigroch
• Caroline Abercrombie
• James Denham
• James Sheffey
• Tyrone Genade
• Thomas Saddler
Immunology and Hematology

• This course will focus on the immunologic and hematologic processes to build a comprehensive understanding of the responses and interventions necessary to combat infectious diseases and blood-born disorders and malignancies.

• The course will compare normal structure and function with dysfunction and disease.

• Students will develop the necessary skills to critically evaluate laboratory data and patient history to develop an effective differential helpful in the performance of clinical course work when immunology and hematology are relevant.
Weekly Themes in Immuno/Heme

• Week 1: Adaptive Immunity
• Week 2: Clinical Immunology and Blood Cancers
• Week 3: Red Blood Cells
• Week 4: Anemias
• Week 5: Clotting and Bleeding
• Week 6: Other Heme Disorders/Infectious Diseases
• Week 7: Assessment Week
Teaching Faculty

• J. Russell Hayman, PhD – Course Director, Microbiology, Immunology
• Robert T. Means, Jr., MD, MACP – Course Co-Director, Hematology
• Robert Schoborg, PhD – Immunology, Microbiology
• Earl Brown, MD – Pathology, Immunology, Hematology
• Paul Monaco, PhD – Histology, Immunology, Hematology
• Kelly Karpa, PhD - Pharmacology
Doctoring TRAILS: Walk One
Course Director: Jerald Mullersman, MD, PhD

• 19 weeks (Fall Semester)
• Incorporates Five Main Components:
  • Communication Skills for Health Professionals
  • Physical Exam Skills
  • Integrated Grand Rounds
  • IPE
  • SPECTRM: System, Professional, Ethical, and Community Topics Relevant to Medicine

• Intro to Clinical Preceptorship
Things to Know
Three-Year Track
(Accelerated Progress to Practice Pathway)

• Submitted to LCME
  • Review in June
• Targeted to begin 2023
• Family Medicine (3x2),
  Internal Medicine (2),
  Pediatrics (1)
Most Important Things for Students to Know

- Carefully planned curriculum - not experimental
- Designed based on student and faculty feedback
- We want students engaged!
  - Active participation in class
  - Working with faculty to continue to improve the curriculum.
Most Important Things for Students to Know

Not Changing

• Dedicated faculty
• #QuillenFamily
• Collaborative environment
• Focus on communication
• Emphasis on primary care and rural medicine
• The mountains!

Changing

• Integrated, organ-system based courses
• Learning Communities
• More active learning
• Consistent, predictable weekly schedules
• Clerkships begin sooner!