Curriculum and Instruction: Medical Education

College of Education, Criminal Justice, and Human Services

2014

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I. Program Overview

Program Overview

Cincinnati Children’s Hospital Medical Center (CCHMC), in partnership with the University of Cincinnati College of Education, Criminal Justice and Human Services (CECH), offers a Master of Education degree for physicians and other healthcare providers involved with or interested in medical teaching and learning or educational research. Those in clinical fellowships may also seek the MEd degree as an alternative to the traditional MPH or MS degrees.

The master’s program is a 30 credit-hour program designed to provide advanced education to health care professionals with an emphasis on adult learning, curriculum and teaching methods, and medical education evaluation and research.

Values and Philosophy

Our Mission

We believe that lifelong learning is a necessity in the modern and ever-changing world. Therefore, our mission is to help physicians and other healthcare professionals meet their educational and professional career goals through online learning, which offers the advantages of flexibility of time and course accessibility. We will provide program participants with accredited, advanced degree coursework and resources to meet professionals’ needs for lifelong learning and career advancement.

Vision of Student Outcomes upon Completion

Most of our students are already involved in medical education and looking to enhance their skills to better perform their current job and progress in their career path. The program is not only for physicians, but for anyone within healthcare who is involved in or interested in medical education and/or educational research. Our students have included physicians, nurses, respiratory therapists, physical therapists, sports trainers, researchers, administrators, house staff personnel and others involved in a variety of positions with educational responsibilities within a healthcare environment. Specifically, student outcomes upon program completion are to prepare medical educators with the knowledge, skills and dispositions to

- be reflective of their teaching and their impact on learners;
- engage learners through a variety of strategies to ensure growth in knowledge and learning processes to become independent lifetime learners;
- collaborate with peers and others in creating learning communities;
- be knowledgeable and current in their areas;
- engage in research to improve educational practices;
- understand the principles of teaching and learning;
- know effective teaching strategies;
- understand performance assessment and program evaluation;
- understand research design.
II. Program Outcomes

Current Program Outcomes
Upon completion of the Master of Education in Curriculum and Instruction (Medical Education) program, students will be able to

1. Apply principles of pedagogy for effective teaching, including theories in teaching with technology, instructional design, instructional methods, and assessment methods in medical education.

2. Identify and discuss the major forces influencing practice of adult teaching and learning concepts in medical education at the global, national and local levels.

3. Apply and discuss the concepts, theories and practices associated with attitude formation and change, including persuasion strategies and cognitive dissonance as it relates to healthcare personnel and patients in a medical environment.

4. Develop, implement and evaluate medical education curricula.

5. Design and develop evidence-based e-portfolios that document critical reflection and professional skills and competencies in formal and non-formal educational settings with appropriate artifacts.

6. Design, evaluate and implement research or scholarly projects using appropriate qualitative and/or quantitative methodologies.

7. Recognize and discriminate the main purpose of data collection and analysis methods used both in qualitative and quantitative research and their advantages and limitations.

8. Develop a research proposal, carry out independent research, and defend research work in oral, written and visual forms.

Program Outcomes Changes
There are two proposed changes to the program outcomes listed above. The first proposed change is to delete program level outcome #7 above. The rationale behind this change is program level outcome #7 should be course level outcomes in the following courses CI7001, EDST8051, and EDST7010 thereby giving students the ability to achieve program level outcome #6 and #8 above. The second proposed change is to merge program level outcomes #6 and #8 above. The rationale behind this change is to combine similar program level outcomes.
Proposed Program Outcomes
Upon completion of the Master of Education in Curriculum and Instruction (Medical Education) program, students will be able to

1. Apply principles of pedagogy for effective teaching, including theories in teaching with technology, instructional design, instructional methods, and assessment methods in medical education.

2. Identify and discuss the major forces influencing practice of adult teaching and learning concepts in medical education at the global, national and local levels.

3. Apply and discuss the concepts, theories and practices associated with attitude formation and change, including persuasion strategies and cognitive dissonance as it relates to healthcare personnel and patients in a medical environment.

4. Develop, implement and evaluate medical education curricula.

5. Design and develop evidence-based e-portfolios that document critical reflection and professional skills and competencies in formal and non-formal educational settings with appropriate artifacts.

6. Design, evaluate, implement and present research or scholarly projects using appropriate qualitative and/or quantitative methodologies in oral, written and visual forms.
III. Curriculum/Program Map
<table>
<thead>
<tr>
<th>Key</th>
<th>Required Courses and Experiences*</th>
<th>Identified in P-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>E: Emerging</td>
<td>CI6075: Field Experiences Practicum</td>
<td>EDST7010: Statistical Data Analysis I</td>
</tr>
<tr>
<td>D: Developing</td>
<td>CI7001: Educational Research for Masters Students</td>
<td>EDST8034: Measurement and Assessment</td>
</tr>
<tr>
<td>A: Achieved</td>
<td>CI7080: Curriculum Development and Evaluation in Medical Education</td>
<td>CI7090: Master's Project: Curriculum Instruction</td>
</tr>
</tbody>
</table>

**OUTCOMES**

1. Apply principles of pedagogy for effective teaching, including theories in teaching with technology, instructional design, instructional methods, and assessment methods in medical education.
   - D, A
   - D, A
   - E, D, A

2. Identify and discuss the major forces influencing practice of adult teaching and learning concepts in medical education at the global, national and local levels.
   - D
   - D
   - E, D, A

3. Apply and discuss the concepts, theories and practices associated with attitude formation and change, including persuasion strategies and cognitive dissonance as it relates to healthcare personnel and patients in a medical environment.
   - E, D, A
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<tr>
<th>E: Emerging</th>
<th>D: Developing</th>
<th>A: Achieved</th>
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<tr>
<td>CI6075: Field Experiences Practicum</td>
<td>CI7001: Educational Research for Masters Students</td>
<td>CI7080: Curriculum Development and Evaluation in Medical Education</td>
</tr>
<tr>
<td>CI7081: Attitude Formation and Change in Medical Education</td>
<td>CI7082: Human and Adult Learning in Medical Education</td>
<td>CI7083: Application of Instructional Design and Technology in Medical Education</td>
</tr>
<tr>
<td>CI7090: Master's Project: Curriculum Instruction</td>
<td>EDST7010: Statistical Data Analysis I</td>
<td>EDST8034: Measurement and Assessment</td>
</tr>
<tr>
<td>EDST8051: Qualitative Research Methods I</td>
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</tr>
</tbody>
</table>

4. Develop, implement and evaluate medical education curricula.

5. Design and develop evidence-based eportfolios that document critical reflection and professional skills and competencies in formal and non-formal educational settings with appropriate artifacts.

6. Design, evaluate, implement and defend research or scholarly projects using appropriate qualitative and/or quantitative methodologies in oral, written and visual forms.

* Please note that you are only identifying required courses and experiences that are housed within your academic unit.
IV. Methods and Measures

Student progress will be assessed through:

**Artifacts**

- **Field Log of 30 Hours Teaching** – A record of 30 hours teaching in a variety of medical education settings
- **Medical Education Graphic Organizer** – A visual representation (single graphic, chart, illustration, or table) that visually helps learners understand any part of a lesson or presentation related to medical education curricula.
- **Final Course Project (CI7082)** – A professional development workshop for healthcare professionals based on human and adult learning theories
- **Attitude Change Project** – Identify a targeted attitude to change in medical education and develop a comprehensive plan for implementation based on the literature
- **Final Course Project (EDST8051)** – The development of a qualitative research proposal to investigate an aspect of medical education curricula
- **ePortfolio** – A collection of electronic evidence showcasing teaching competencies, projects, research and achievements
- **Master’s Research Proposal** – A research proposal outlining the introduction and statement of a research problem, a review of the literature, and proposed methodology
- **Final Course Project (EDST7010)** – A project synthesizing the application of quantitative methodology and statistical analysis

**Observation/Performance Assessment**

- **Self, Peer, and Expert Evaluations of Teaching** – A documented record of two self-critiques, three peer evaluations, and three expert evaluations of teaching

**Reflective Essays**

- **Learning Log Journal** – A journal reflecting on learning theories and the connection to Web 2.0 applications for teaching in medical education

**Course Enabled Assessment**

- **Course quizzes** – A quiz in a course
- **Course exams** – An exam in a course

**Performance Assessment**

- **Learning Contract and Professional Learning Plan** – A completed self-assessment of adult learning competencies and the development of a professional learning plan including competencies to be addressed, resources and strategies, evidence, and verification
Student Papers and Projects

- **Attitude and Behavior Prediction Paper** – A theoretical analysis of attitudes predicting behavior based on practice at degrees of correspondence.
- **Behavior Change Project** – A plan to implement the change of attitude and behavior in a medical education setting
- **Educational Goal and Objective Vision Statement** – An educational philosophy statement connected to a specific educational goal and objective
- **Curriculum Development and Implementation Plan** – A plan to develop and implement a specific medical education curriculum
- **Plan for Measuring Curriculum Impact** – A plan for assessing and evaluating a medical education curriculum

Culminating Assignments

- **Master’s Final Project Paper** – A culminating publishable paper reporting an implemented quantitative, qualitative, or mixed-methods research initiative
<table>
<thead>
<tr>
<th>Program Outcome</th>
<th>Assessment Tools</th>
<th>Course/ Experience</th>
<th>Time Line</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Apply principles of pedagogy for effective teaching, including theories in</td>
<td>Artifact: Field Work Log of 30 Hours Teaching (D level)</td>
<td>CI6075: Field Experiences Practicum</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td>teaching with technology, instructional design, instructional methods, and</td>
<td>Observations/Performance Assessment: Peer, Expert, and Self Evaluations of Teaching (D, and A levels)</td>
<td>CI6075: Field Experiences Practicum</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
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<tr>
<td>assessment methods in medical education.</td>
<td>Reflective Essays: Learning Log Journal on Learning Theories and Web 2.0 applications for teaching</td>
<td>CI7083: Instructional Design and Technology</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
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<tr>
<td></td>
<td>(E and D levels)</td>
<td>CI7083: Instructional Design and Technology</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Artifact: Medical Education Graphic Organizer (D level)</td>
<td>CI7083: Instructional Design and Technology</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Artifact: Instructional Design Project (A level)</td>
<td>CI7083: Instructional Design and Technology</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Course-Enabled Assessment: Exam #1 and Exam #2 (E and D levels)</td>
<td>EDST8034: Measurement and Assessment</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
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| 2. Identify and discuss the major forces influencing practice of adult teaching and learning concepts in medical education at the global, national and local levels. | **Artifact**: Field Work Log of 30 Hours Teaching (D level)  
**Observations/Performance Assessment**: Peer, Expert, and Self Evaluations of Teaching (D and level)  
**Performance Assessment**: Learning Contract and Professional Learning Plan (E and D levels)  
**Course-Enabled Assessment**: Quiz #1 (D level)  
**Artifact**: Final Project – Creating a Professional Development Workshop for Healthcare Professionals (A level) | CI6075: Field Experiences Practicum  
CI6075: Field Experiences Practicum  
CI7082: Adult and Human Learning in Medical Education  
CI7082: Adult and Human Learning in Medical Education | Collected during the semester  
Collected during the semester  
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Collected during the semester | Course Instructor  
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| 3. Apply and discuss the concepts, theories and practices associated with attitude formation and change, including persuasion strategies and cognitive dissonance as it relates to healthcare personnel and patients in a medical environment. | Student Papers and Projects: Attitude and Behavior Prediction (E level)  
Student Papers and Projects: Behavioral Change Project (D level)  
Artifact: Attitude Change Project Development and Implementation (A level) | CI7081: Attitude Formation and Change in Medical Education  
CI7081: Attitude Formation and Change in Medical Education  
CI7081: Attitude Formation and Change in Medical Education | Collected during the semester  
Collected during the semester  
Collected during the semester | Course Instructor  
Course Instructor  
Course Instructor |
| 4. Develop, implement and evaluate medical education curricula. | Student Papers and Projects: Educational Goal and Objective Vision Statement (E level)  
Student Papers and Projects: Curriculum Development and Implementation Plan (E and D levels)  
Artifact: Medical Education Graphic Organizer (E and D levels)  
Artifact: Final Project (E, and D levels)  
Student Papers and Projects: Plan for Measuring Curriculum Impact (A level) | CI7080: Curriculum Development and Evaluation for Medical Education  
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CI7083: Instructional Design and Technology  
EDST8051: Qualitative Research Methods  
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<td>5. Design and develop evidence-based eportfolios that document critical reflection and professional skills and competencies in formal and non-formal educational settings with appropriate artifacts.</td>
<td>Artifact: ePortfolio (E, D, and A levels)</td>
<td>CI6075: Field Experiences Practicum</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td>6. Design, evaluate, implement and defend research or scholarly projects using appropriate qualitative and/or quantitative methodologies in oral, written and visual forms.</td>
<td>Artifact: Master’s Research Proposal (E and D levels)</td>
<td>CI7001: Educational Research for Master’s Students</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Artifact: Final Project (E and D levels)</td>
<td>EDST7010: Introductory Statistical Methods</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Artifact: Final Project (E, D, and A levels)</td>
<td>EDST8051: Qualitative Research Methods</td>
<td>Collected during the semester</td>
<td>Course Instructor</td>
</tr>
<tr>
<td></td>
<td>Culminating Assignment: Master’s Final Project Paper (A level)</td>
<td>CI7090: Master’s Project in Curriculum and Instruction</td>
<td>Collected during the final semester in the program</td>
<td>Faculty Advisor, master’s project committee faculty</td>
</tr>
</tbody>
</table>
IV. Assessment Infrastructure

Accountable Personnel and Administrative Support
The Associate Program Director will lead the assessment process for the Master of Education in Curriculum and Instruction in Medical Education program. The Program Coordinator will provide direct assistance to the Associate Program Director as necessary and appropriate. Program faculty will complete key assessment rubrics in associated courses at all levels, (emerging, developing, and achieved) and submit the assessments to the Program Coordinator on a semester basis. Key assessments are defined as assessments identified in the “Assessment Measures Aligned with Program Outcomes” section of this plan. The assessment cycle will be continuous and implemented according to the following plan on an annual basis:

<table>
<thead>
<tr>
<th>Product/Process</th>
<th>Timeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Assessment Rubric Development and Pilot</td>
<td>Summer Semester 2014</td>
</tr>
<tr>
<td>Data Collection, Data Analysis, and Formative Assessment Report Development</td>
<td>Fall, Spring, and Summer Semesters</td>
</tr>
<tr>
<td>Dissemination, Discussion, and Action</td>
<td>Fall, Spring, and Summer Semesters</td>
</tr>
<tr>
<td>Annual Summative Report, Dissemination, and Action</td>
<td>Fall Semester</td>
</tr>
<tr>
<td>Submission of Program Changes</td>
<td>February 1 each Academic Year</td>
</tr>
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</table>

**Key Assessment Rubric Development and Pilot: Summer Semester 2014**
Prior to the start of summer semester 2014, all program faculty will be lead through the development of key assessment rubrics aligned with program outcomes at the associated levels embedded in coursework: emerging, developing, and achieved. Faculty who teach during summer semester will pilot the rubrics and modify them as determined by faculty and/or the Associate Program Director. Faculty who do not teach in the summer will develop associated rubrics for implementation during fall semester 2014.

The Associate Program Director will meet with each faculty member individually early in the semester to clearly describe the purpose for rubric development, to ensure alignment of the rubric with program level outcomes and to communicate the process for completing and submitting the key assessment rubrics to the Program Coordinator. At the end of the summer semester, the Associate Director will audit the process with each of the program faculty who piloted the use of key assessment rubrics.

**Data Collection, Data Analysis, and Formative Assessment Report Development: Fall, Spring and Summer Semesters**
Key assessment rubric data will be collected from every course and program experience during each semester of every academic year. At the end of each semester, the Associate Director will analyze the collected data and produce a Program Outcome Formative Assessment Report to
be shared with the Program Coordinator, Program Faculty, the Program Advisory Board, and other relevant stakeholders.

**Dissemination, Discussion, and Action: Fall, Spring and Summer Semesters**
The Program Outcome Formative Assessment Report developed at the end of each semester for Fall, Spring and Summer will be shared and discussed during regular program faculty meetings and with the Program Advisory Board and other relevant stakeholders. Representative faculty will address any actionable items that may arise from the report and make modifications as appropriate. Items that require any significant program changes must be addressed and submitted by February 1st for implementation the following fall semester in the next academic year.

**Annual Summative Report Development, Dissemination, and Action: Fall**
The Associate Program Director will generate an Annual Summative Report to be shared with the Program Coordinator, faculty, the Program Advisory Board, and other relevant stakeholders. This report will aggregate the data from each semester to provide the program and other relevant stakeholders an accurate measurement of program outcomes for the academic year just completed. Items that require any significant program changes must be addressed and submitted by February 1st for implementation the following fall semester in the next academic year.

**Submission of Program Changes: February 1st**
All program changes must be addressed and submitted by February 1st for implementation the following fall semester in the next academic year.
V. Findings

Not applicable at this time.
VI. Use of Findings

Not applicable at this time.