**example 8: master educator**

**INNOVATIVE CURRICULUM DESIGN AND/OR ASSESSMENT WORKSHEET**

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| **Brief description of curriculum or assessment product** | Ph.D. Core Curriculum consisting of 3 major courses (A, B, and C) |
| **Co-developer(s)** | I helped develop and transform our core curriculum together with Drs. X and Y. |
| **Your role in development** | As Co-Director of the XYZ Training Program (X year -present) and Co-Director of one of the core courses |
| **Intended Audience** | Training level of learners: Students in the MD/PhD, PhD, and MS programs |
| **Number of Learners Taught or Assessed****(Quantity)** | Each course meets for ~1hr daily, during the Fall, Early Spring and Late Spring graduate school semesters. Each of these 3 courses is approximately 60 hours of lecture and discussion, yielding ~180 course hours per year. Class size is approximately 15 students per session (15 students/year) |
| **# Years this has been used** | This curriculum has been taught as a ‘stand alone’ core curriculum for 3 years (Year 1-Year 3). The individual courses have been offered for substantially longer as advanced courses in the XYZ Training Area. |
| **Goals/Objectives** | Our goal was to develop an independent XYZ curriculum, tailored to the needs of XYZ PhD and MD/PhD trainees, teaching them XYZ with greater depth and breadth in comparison to the previous curriculum. We also wanted to use innovative teaching techniques to improve active learning. See Appendix A: Specific objectives for each course |
| **Needs Assessment** | 1. As noted in ‘Goals’ the more general PhD curriculum did not provide XYZ Science students with an adequate fund of knowledge in this specialty area.
2. We carried out an analysis of curricula offered by the best University- and Medical School-based XYZ Science Programs and used best practices and feedback from those course directors to design our curriculum.
3. We developed the 3 core courses that when taken together, would provide a very similar curriculum to that offered by the nation’s best XYZ training programs.
4. We reviewed the literature for “best practice” teaching formats
5. I attended a workshop on the use of Team Based Learning
6. We have obtained NIH T32 support for Year 1 and Year 2 students taking this curriculum.
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| **Design** | 1. Content was chosen based upon extensive research as detailed above (See appendix B for course syllabus)
2. Format: Our core curriculum and ‘work in progress’ journal clubs are taught using
	1. Didactic faculty lectures
	2. Student-driven weekly journal article discussions
	3. Twice weekly Team Based Learning (TBL) sessions
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| **Evaluation Methods and Findings** | 1. **Learner ratings** reviewed by curriculum committee have been extremely favorable for the 3 core courses. Student evaluation summaries for the 3 core courses combined in the last 3 years:

| **Year** | **Year 1** | **Year 2** | **Year 3** |
| --- | --- | --- | --- |
| **Quality of Course***Rating Scale (1-5, 5 Superior)* | N=15Rating=4.3 | N=15Rating=4.6 | N=15Rating=4.7 |

1. **Continued Improvements:** Courses are modified each year based upon evaluation data. For example, this year for Core Course A, we added new lectures in 3 new areas and eliminated redundant or poorly received lectures. We also provided faculty development sessions on how to lecture and how to do TBL to our course faculty. Students were extremely enthusiastic about the team based learning sessions and faculty believed the sessions produced the most effective learning: more depth of discussions and greater student enthusiasm for learning. We increased the number of TBL sessions and will continue to increase use as we train faculty.
2. **Evidence of improvement over time:** students take an XYZ qualifying exam after completing the core curriculum, allowing us to get a sense of the strengths and weaknesses of the curriculum. It should be noted that this is an oral exam, and that the faculty exam committees vary among students, so it is difficult to quantify improvement. No standardized exams are given before and after completion of the curriculum that would directly assess and quantify an increase in content knowledge. However, since starting the new curriculum, no student has failed the exam.
3. **Outcomes:** We believe the Qualifying Exam given after the completion of the core curriculum gives us our best feedback. This oral general knowledge exam is, however, not easily quantifiable, so we have used qualitative comparisons to earlier years to assess the efficacy of our curriculum. We also used the survey results as described above.
4. **Comparison to national programs:** Our current curriculum is similar to those offered by the majority of top PhD programs, helping to make us competitive for top applicants, and improving the training of our graduate students compared to the older curriculum. We are the only program using team based learning.
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| **Evaluation Methods and Findings cont.** | 1. **Learner ratings** reviewed by curriculum committee have been extremely favorable for the 3 core courses. Student evaluation summaries for the 3 core courses combined in the last 3 years:

| **Year** | **Year 1** | **Year 2** | **Year 3** |
| --- | --- | --- | --- |
| **Quality of Course***Rating Scale (1-5, 5 Superior)* | N=15Rating=4.3 | N=15Rating=4.6 | N=15Rating=4.7 |

1. **Continued Improvements:** Courses are modified each year based upon evaluation data. For example, this year for Core Course A, we added new lectures in 3 new areas and eliminated redundant or poorly received lectures. We also provided faculty development sessions on how to lecture and how to do TBL to our course faculty. Students were extremely enthusiastic about the team based learning sessions and faculty believed the sessions produced the most effective learning: more depth of discussions and greater student enthusiasm for learning. We increased the number of TBL sessions and will continue to increase use as we train faculty.
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| **Evidence of Dissemination** | 1. The core curriculum was approved by MSSM’s Curriculum Committee. Our XYZ training Program received an extremely favorable external review authored by Drs. XYZ (attached), internationally respected investigators and educators in the field.
2. Because of my role with the training program we developed, I was asked to participate on a committee to evaluate graduate school curriculum and education (GP or ‘good practices’) at the University of XYZ in Japan.
3. Other course directors have asked me to help them revamp their teaching formats and integrate TBL
4. Curriculum presented as a poster at a national meeting
5. In Year X, we obtained an NIH T32 grant based on the new XYZ core curriculum, which will support 4 PhD trainees in either Year 1 or Year 2. This is Mount Sinai’s first XYZ T32 NIH Training Grant. Favorable study section reviewer comments of our revised application are attached in Appendix C
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