

## **Connecticut Health and Life Sciences Career Initiative (HL-SCI) Online Hybrid Review Process**

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Subject: Online/Hybrid Course Third-Party Review Process

CT Health and Life Sciences Career Initiative partnered with Microburst Learning (MBL) to perform a third-party review of online, hybrid, and flipped courses created as part of the HL-SCI initiative in order to ensure the deployment of at least four hundred fifty (450) modules which contain self-assessments in those courses, as well as review the courses for best practices.

### **Definitions**

Consortium colleges developed 71 new online/hybrid courses. Hybrid courses are a combination of online and in-class instruction. There is no specific percentage set for the amount of instruction in a hybrid course, but some percentage of instructional time that normally would have taken place inside the classroom must be replaced with work that takes place online. Online learning may include both synchronous and asynchronous communication.

Microburst Learning provided a third-party review of 71 courses developed to ensure that the courses reflected best practices for online learning, ADA/CAST compliance and included a total of at least 450 modules with self-assessments across all courses.

Per communication with Lesley Mara, Senior Project Director, self-assessments were defined using the following protocol:

- Acceptable assessments include quizzes, discussion board postings, journal entry/reflection, assignment, and written assessments.
- These assessments will be an activity or exercise that the student completes at the end of a given module to test understanding – not necessarily as a graded assessment.
- The assessment will need to be offered at the module-level, i.e., the equivalent of a classroom session. Activities that are course assessments or cover materials from more than one learning module will not be counted in this deliverable.

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Per communication with Lesley Mara, Senior Project Director, modules were defined using the following protocol:

- Within a course, if an instructor listed the term “module” in the syllabus or inside Blackboard (whether it is online or hybrid), it is considered as one module.
- If there is no wording listed as “module” in the syllabus or on Blackboard but there is wording such as session, week, lab, then we need to count those as one module.
- A module is the material presented for one hour or one hour of seat time. A chapter may be delivered in one or more modules as specified by the instructor, but a module may not exceed the content equivalent to one chapter.
- One lab period is equivalent to one module.
- Please note that if a hybrid course lists several chapters in an instructor listed “Module”, 4 chapters for example, then the actual number of modules counted will be the number of chapters.

### **Third-Party Review**

MBL developed a customized Standards Review Guide that was used to review courses for best practices in online learning, ADA/CAST compliance, whether the course contained publisher content, the number of modules in each course, and the number of self-assessments in each course. Some standards covered in the rubric were:

- clear table of contents
- clearly written instructions
- videos contain closed captioning
- content is in short, manageable segments and easy for learner to access
- assessments promote critical thinking
- clear and consistent navigation
- attachments and hyperlinks work and are accessible
- copyrighted items are annotated
- content is clear and understandable

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Additionally, MBL included a number of AIM/CAST Compliance standards on the rubric when reviewing instructor developed content, including:

- Closed Captioning in videos (and/or transcripts as requested)
- Narration of text on screen
- Color contrast approved ratio for background and foreground colors is 4.5:1 or greater
- Contains Clear and Consistent Navigation
- Text is not contained inside of an image
- Attachments and lessons are in Word vs pdf and have contrast between headings, text, and backgrounds
- Hyperlinks are active and clearly identified
- Page numbers listed in online material match printed text
- Table Markup includes identifiers (rows and columns that is compatible with assistive technology or rendered in an application such as a browser that offers this functionality)
- Audio/video content is shown in a media player that supports closed captioning

MBL reviewers used this custom rubric to review each course on the aforementioned standards and noted any recommendations and suggestions in the rubric. Content that was developed by the professor and not by a publisher was also reviewed for spelling, grammar and formatting, and appropriate change suggestions were noted.

MBL's Technical Advisory Committee was available throughout the review process and was consulted by MBL reviewers when necessary. This committee included the following members:

- Karen Follin, RN, MSN, ACNP-BC, CCNS, CEN, SANE
- Dr. Lori Geddings, Doctor of Veterinary Medicine (DVM)
- Dr. Robin Matutina, Nursing PhD and Instructor for Medical University of South Carolina
- Dr. Jordan Johnson, Ed.D., SPHR
- Dr. James Payne, PhD; Physics Instructor
- Lauren Pepin, PA-C
- Tracy Taylor, MS in Physical Inorganic Chemistry
- Ginny Thaxton, Nurse Practitioner
- Dr. Edward Tracy, Electrical Engineer and MD; Chief Resident for Medical University of South Carolina and Dr. for VA

## **Results**

Using a Standards Review Guide, MBL reviewed 71 online, hybrid, or flipped courses. MBL determined that there are a total of approximately 8,837 embedded self-assessments in the 71 online/hybrid courses that were reviewed. These 71 online/hybrid courses contain 970 modules, 789 of which contain at least 1 self-assessment. As this greatly exceeds the target number of 450 modules across the courses which contain self-assessments, no additional self-assessments were developed.

## **Connecticut Health and Life Sciences Career Initiative (HL-SCI) Online Hybrid Review Process**

MBL analyzed and researched the textbook publishers whose content was used in the courses. MBL determined that the publishers are experts in their corresponding fields and the content provided by the publishers could be trusted as accurate and appropriate. None of the courses were uploaded to SkillsCommons as all courses use publisher copyrighted material that cannot be released as Open Source.

### **Online / Hybrid / Flipped Courses Reviewed**

#### **Capital Community College**

1. BIO 100 (H) Basic Biology
2. BIO 105 (H) Intro to Biology
3. BIO 211 (H) Anatomy & Physiology I
4. BIO 235 (H) Microbiology
5. CHE 111 (H) Concepts of Chemistry
6. HIM 155 (O) Fundamentals of Clinical Informatics and Electronic Medical Records
7. HIM 254 (O) Health Information Management Practicum
8. NUR 103 (H) Pharmacology for Families Across the Lifespan I
9. NUR 202 (H) Pharmacology for Individuals and Families with Intermediate Health Care Needs
10. NUR 204 (H) Pharmacology for Individuals, Families, and Groups with Complex Health Care Needs
11. PHY 121 (H) General Physics I
12. SCI 200 (O/H) Forensic Science

#### **Gateway Community College**

13. BBG 210 (O) Fundamentals of Business Communication
14. BIO 213 (H) Human Cadaver Anatomy
15. BOT 111 (F) Keyboarding for Information Processing I
16. BOT 111 (H) Keyboarding for Information Processing I
17. BOT 112 (H) Keyboarding for Information Processing II
18. BOT 112 (O) Keyboarding for Information Processing II
19. BOT 137 (H) Word Processing Applications
20. BOT 137 (O) Word Processing Applications
21. BOT 279 (H) BOT Administrative Practicum
22. CHE 220 (H) Biochemistry
23. DMS 104 (F) Introduction to Abdominal / Small Parts Sonography
24. EXS 225 (F) Essentials of Strength and Conditioning
25. EXS 227 (F) Exercise Programming and Design
26. EXS 235 (F) Exercise Physiology
27. PHY 101 (H) Physics for Today
28. RAD 105 (H) Radiographic Anatomy and Procedures I
29. RAD 196 (H) Radiographic Anatomy and Procedures III
30. RAD 204 (H) Radiographic Anatomy and Procedures II
31. RAD 218 (H) Senior Seminar

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### **Manchester Community College**

- 32. BIO 211 (H) Anatomy and Physiology I
- 33. BIO 212 (H) Anatomy and Physiology II
- 34. BOT 111 (O) Keyboarding for Information Processing I
- 35. BOT 112 (H) Keyboarding for Information Processing II
- 36. BOT 112 (O) Keyboarding for Information Processing II
- 37. BOT 282 (H) Medical Administrative Procedures
- 38. BOT 287 (H) Foundations / Management Medical Insurance
- 39. BOT 288 (H) Medical Practice Management Software Applications
- 40. BOT 291 (H) Electronic Health Records
- 41. CHE 121 (H) General Chemistry I
- 42. EVS 100 (O) Introduction to Environmental Science
- 43. EVS 130 (O) Sustainable Energy and the Environment
- 44. HLT 151 (O) Health and Wellness Promotion
- 45. MAT 139 (H) Elementary and Intermediate Algebra Combined
- 46. PHY 110 (H) Introductory Physics

### **Middlesex Community College**

- 47. CAT 201 (O) Cross Sectional Anatomy I
- 48. CAT 202 (O) CT Image Display, Post Processing, & Quality Assurance I
- 49. CAT 203 (O) CT Procedures & Instrumentation I
- 50. CAT 205 (O) Cross Sectional Anatomy II
- 51. CAT 206 (O) CT Image Display, Post Processing, & Quality Assurance II
- 52. CAT 207 (O) CT Procedures & Instrumentation II
- 53. HIM 102 (O) Introduction to Healthcare Systems
- 54. HIM 201 (O) Health Information Management Principles
- 55. HIM 203 (O) Pathophysiology
- 56. HIM 205 (O) Medical Coding I
- 57. HIM 206 (O) Medical Coding II
- 58. HIM 256 (O) Legal and Ethical Issues of HIM
- 59. HLT 160 (O/H) Introduction to Public Health
- 60. MAM 201 (O) Principles of Mammography
- 61. HIM 112 (O) Medical Insurance & Reimbursement
- 62. OMA 101 (H) Introduction to Ophthalmic Medical Assisting
- 63. OMA 102 (H) Ocular Anatomy, Physiology, & Pathology
- 64. OMA 103 (H) Ophthalmic Clinical Skills & Procedures
- 65. OMA 104 (H) Healthcare Policies & Procedures

### **Norwalk Community College**

- 66. BIO 235 (H) Microbiology
- 67. NUR 103 (H) Pharmacology for Nursing I
- 68. NUR 202 (O) Nursing Care of Individuals and Families II
- 69. NUR 204 (O) Pharmacology for Nursing III
- 70. NUR 205 (H) Nursing Management and Trends
- 71. PTA 250 (H) Therapeutic Exercise

### **Additional Information**

For additional information regarding Microburst Learning's review process and custom rubric, please call 803-719-5073.



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