

## End of Course (EOC) Bank Blueprints

# Medical Bioscience

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**THE OHIO STATE UNIVERSITY**  
CENTER ON EDUCATION AND  
TRAINING FOR EMPLOYMENT

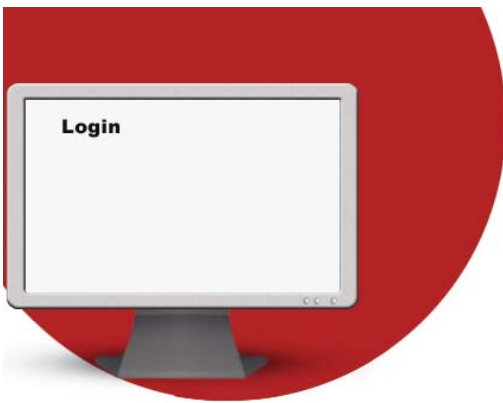
**Ohio** | Department  
of Education



### About Test Blueprints

Test blueprints are created to provide guidance to Subject Matter Experts (SMEs) during the item writing phase of test development. In addition, we believe that they can assist those instructors who did not participate in item writing (and administrators) to understand the broad content of the item bank. Items are formally allocated across a course outline in a three-step process\*:

1. CETE psychometricians use a formula which assumes that all competencies within a course outline are *essential* and of equal importance to produce a suggested test blueprint for review by Ohio Department of Education program specialists and SMEs.
2. SMEs review the blueprint as a large group before item writing for a specific EOC test. There and in small groups, SMEs review the course outline and have the ability to make changes to the blueprint with a documented rationale based on their experience and expertise.
3. Any revisions during small group work must be approved by the larger panel of SMEs attending an item writing workshop, which is the last step and produces the final blueprint which is summarized in this document.



Test blueprints can provide high-level guidance to instructors on preparing students for testing. It is important to keep in mind that the blueprint is a tool that is used when developing the test item bank during initial item writing and test creation. As with all tests, the End-of-Course test forms are a sample of the item bank.

### Interpreting the Blueprints

Test blueprints display the total number of test items SMEs planned to write to a particular *outcome* (as designated in the course outline created by the Ohio Department of Education Office of Career-Technical Education or by a vendor). Blueprints describe the structure of the item bank which is the total pool of test items created. Final test forms of 40-items are created from the item bank.

\*This newer process for producing test blueprints was implemented October 1, 2015. Item banks created prior to this date were completed under a different blueprint process and therefore we are looking backward to provide the structure of the item bank. As revisions are completed for those career fields, for example Information Technology (2017-18), the blueprint process used will be the newer model.

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# Health Science and Technology

ODE Subject Code: 072001

Outcome #	Outcome Name	% Items In Bank
<b>Strand 1. Business Operations/21st Century Skills</b>		
1.1.	Employability Skills	6.19
1.2.	Leadership and Communications	4.12
1.3.	Business Ethics and Law	5.15
1.4.	Knowledge Management and Information Technology	3.09
1.5.	Global Environment	4.12
1.6.	Business Literacy	3.09
<b>Strand 2. Human Body System</b>		
2.1.	Human Body Form, Function, and Pathophysiology	3.09
2.2.	Evaluate Body Systems	3.09
2.3.	Medical Terminology	9.28
<b>Strand 3. Therapeutic Interventions</b>		
3.1.	Environmental Interventions	7.22
3.2.	Health Promotion Interventions	4.12
3.3.	Pharmaceutical Interventions	11.34
3.5.	Nutritional Interventions	3.09
3.7.	Dental Interventions	4.12
<b>Strand 4. Assistive Care</b>		
4.1.	Scope of Practice	7.22
4.2.	Therapeutic Communication and Interpersonal Skills	3.09
4.3.	Microorganisms, Infection Control, and Infection	3.09
4.8.	End-of-Life Care	5.15
<b>Strand 5. Bioscience Research and Development</b>		
5.9.	Clinical Laboratory Techniques and Procedures	4.12
<b>Strand 6. Health Information Management</b>		
6.1.	Health Information Literacy	3.09
6.2.	Confidentiality, Privacy, and Security	3.09



# Principles and Practices of Biomedical Technology

ODE Subject Code: 072110

Outcome #	Outcome Name	% Items In Bank
<b>Strand 5. Bioscience Research and Development</b>		
5.1.	Handling, Preparation, Storage, and Disposal	30.59
5.8.	Biotechnology Research and Experiments	69.41



# Biomedical Engineering

ODE Subject Code: 072115

Outcome #	Outcome Name	% Items In Bank
<b>Strand 5. Bioscience Research and Development</b>		
5.6.	Culturing	65.48
5.7.	Bioreactor Technologies	17.86
5.8.	Biotechnology Research and Experiments	16.67



## Biochemistry of Health

ODE Subject Code: 072120

Outcome #	Outcome Name	% Items In Bank
<b>Strand 5. Bioscience Research and Development</b>		
5.1.	Handling, Preparation, Storage, and Disposal	52.94
5.2.	Foundations of Chemistry	47.06



## Biotechnology for Health and Disease

ODE Subject Code: 072125

Outcome #	Outcome Name	% Items In Bank
<b>Strand 5. Bioscience Research and Development</b>		
5.3.	Microbiology Testing and Technology	55.29
5.4.	Bio-Molecular Technology	25.88
5.5.	Laboratory Standard Operational Procedures	9.41
5.6.	Culturing	9.41



**Genetics of Disease**  
ODE Subject Code: 072130

Outcome #	Outcome Name	% Items In Bank
<b>Strand 5. Bioscience Research and Development</b>		
5.4.	Bio-Molecular Technology	56.18
5.5.	Laboratory Standard Operational Procedures	12.36
5.6.	Culturing	20.22
5.8.	Biotechnology Research and Experiments	11.24





# Medical Terminology

ODE Subject Code: 072150

Outcome #	Outcome Name	% Items In Bank
<b>Strand 2. Human Body System</b>		
2.1.	Human Body Form, Function, and Pathophysiology	25.81
2.3.	Medical Terminology	18.28
<b>Strand 3. Therapeutic Interventions</b>		
3.3.	Pharmaceutical Interventions	7.53
<b>Strand 4. Assistive Care</b>		
4.1.	Scope of Practice	15.05
4.3.	Pathogenic Microorganisms, Infection Control, and Infection	4.30
<b>Strand 5. Bioscience Research and Development</b>		
5.3.	Microbiology Testing and Technology	5.38
<b>Strand 6. Health Information Management</b>		
6.1.	Health Information Literacy	10.75
6.2.	Confidentiality, Privacy, and Security	6.45
6.3.	Electronic Health Records and Coding	6.45



# Human Anatomy and Physiology

ODE Subject Code: 072040

Outcome #	Outcome Name	% Items In Bank
<b>Strand 2. Human Body System</b>		
2.1.	Human Body Form, Function, and Pathophysiology	43.90
2.2.	Evaluate Body Systems	18.29
2.3.	Medical Terminology	21.95
<b>Strand 5. Bioscience Research and Development</b>		
5.3.	Microbiology Testing and Technology	4.88
5.4.	Bio-Molecular Technology	3.66
5.5.	Laboratory Standard Operational Procedures	3.66
5.6.	Culturing	3.66



# Human Pathophysiology

ODE Subject Code: 072045

Outcome #	Outcome Name	% Items In Bank
<b>Strand 2. Human Body System</b>		
2.1.	Human Body Form, Function, and Pathophysiology	19.75
2.3.	Medical Terminology	6.17
<b>Strand 3. Therapeutic Interventions</b>		
3.1.	Environmental Interventions	6.17
3.3.	Pharmaceutical Interventions	3.70
<b>Strand 4. Assistive Care</b>		
4.1.	Scope of Practice	6.17
4.3.	Microorganisms, Infection Control, and Infection	11.11
<b>Strand 5. Bioscience Research and Development</b>		
5.2.	Foundations of Chemistry	7.41
5.3.	Microbiology Testing and Technology	7.41
5.4.	Bio-Molecular Technology	6.17
5.6.	Culturing	8.64
5.7.	Bioreactor Technologies	3.70
5.9.	Clinical Laboratory Techniques and Procedures	4.94
<b>Strand 6. Health Information Management</b>		
6.1.	Health Information Literacy	2.47
6.2.	Confidentiality, Privacy, and Security	6.17

