

Appendix 4: Assessment tools

Measurement tool 9: Employer/Mentor Questionnaire

Your employee-student, Mr./Ms. _____, is a graduate of the Department of Biological Sciences at Western Michigan University. As part of our self-assessment program we are seeking to determine if we are adequately preparing our students for their professional careers. In this respect we ask if you could take a few minutes to complete the following questionnaire regarding this student's academic preparation.

In what capacity is this student known to you?....

Graduate student: (which field of study?): _____
 Health professions student: (which specialty): _____
 High School Teacher (which subjects): _____
 Employee (specify job title): _____

How well is this student prepared in the following areas? Please indicate your evaluation using the following scale:

	0	1	2	3	4	5
	not applicable	very poorly	poorly	adequately	well prepared	very well prepared
General Biological Knowledge	0	1	2	3	4	5
Biology field and laboratory techniques	0	1	2	3	4	5
Chemistry	0	1	2	3	4	5
Physics	0	1	2	3	4	5
Mathematics	0	1	2	3	4	5
Statistics	0	1	2	3	4	5
Public Speaking Skills	0	1	2	3	4	5
Technical Writing	0	1	2	3	4	5
Problem Solving/Critical Thinking	0	1	2	3	4	5
technical laboratory skills	0	1	2	3	4	5

If you marked 1 or 2 for skills, please comment about what is lacking.

Within the Biological Sciences, does this person have adequate knowledge of the following areas to meet his/her professional responsibilities under your supervision?

Molecular Biology/Biochemistry	0	1	2	3	4	5
Cellular Biology	0	1	2	3	4	5
Plant Biology	0	1	2	3	4	5
Non-Human Animal Biology	0	1	2	3	4	5
Human Biology	0	1	2	3	4	5
Microbiology	0	1	2	3	4	5
Genetics	0	1	2	3	4	5
Environmental Biology/Ecology	0	1	2	3	4	5
Evolutionary Biology	0	1	2	3	4	5
Developmental Biology	0	1	2	3	4	5
Physiology	0	1	2	3	4	5

Other - Please specify _____

Thank you for your time. Please return this questionnaire in the enclosed, stamped, addressed envelope.

Measurement tool 10: Alumni survey

1. What is your current activity/employment? _____
2. Which major program did you take at WMU? Biomedical Sciences Biology
3. Did you complete a research project as part of your major? Yes No
4. Have you gone on to graduate or professional school? Yes No

For the following statements, please indicate how strongly you agree with each statement by circling the appropriate number.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

The following core courses were significant for the major?

Please score only if you took the course.

- | | | | | | | |
|-----|---|---|---|---|---|---|
| 5. | BIOS 150 Cell and Molecular | 1 | 2 | 3 | 4 | 5 |
| 6. | BIOS 151 Organismal | 1 | 2 | 3 | 4 | 5 |
| 7. | BIOS 211 Human Anatomy | 1 | 2 | 3 | 4 | 5 |
| 8. | BIOS 213 Cell Biology | 1 | 2 | 3 | 4 | 5 |
| 9. | BIOS 250 Genetics | 1 | 2 | 3 | 4 | 5 |
| 10. | BIOS 301 Ecology | 1 | 2 | 3 | 4 | 5 |
| 11. | BIOS 312 Microbiology | 1 | 2 | 3 | 4 | 5 |
| 12. | BIOS 319 Plant Physiology | 1 | 2 | 3 | 4 | 5 |
| 13. | BIOS 350 Human Physiology | 1 | 2 | 3 | 4 | 5 |
| 14. | I was satisfied with <i>availability</i> of courses in the major. | 1 | 2 | 3 | 4 | 5 |
| 15. | I was satisfied with the <i>content</i> of the major. | 1 | 2 | 3 | 4 | 5 |

The following cognate requirements were important.

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|-----|---|---|---|---|---|---|
| 16. | Inorganic chemistry | 1 | 2 | 3 | 4 | 5 |
| 17. | Organic chemistry | 1 | 2 | 3 | 4 | 5 |
| 18. | Biochemistry | 1 | 2 | 3 | 4 | 5 |
| 19. | Biochemistry laboratory | 1 | 2 | 3 | 4 | 5 |
| 20. | 8 hours of college mathematics | 1 | 2 | 3 | 4 | 5 |
| 21. | 2 semesters of general physics with lab | 1 | 2 | 3 | 4 | 5 |
| 22. | GEOL 130 as a substitute for one physics course | 1 | 2 | 3 | 4 | 5 |
| 23. | The major had sufficient practical training (lab or field). | 1 | 2 | 3 | 4 | 5 |
| 24. | A research project would have been valuable. | 1 | 2 | 3 | 4 | 5 |
| 25. | I attended WMU for a Biological Sciences major. | 1 | 2 | 3 | 4 | 5 |
| 26. | My job utilizes my major. | 1 | 2 | 3 | 4 | 5 |
| 27. | My major helped fulfill my career aspirations? | 1 | 2 | 3 | 4 | 5 |
| 28. | I came to WMU to prepare for medical or dental school. | 1 | 2 | 3 | 4 | 5 |
| 29. | My preprofessional curriculum was helpful. | 1 | 2 | 3 | 4 | 5 |

The Biological Sciences Curriculum prepared me well in

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|-----|--------------------------------|---|---|---|---|---|
| 30. | Molecular Biology/Biochemistry | 1 | 2 | 3 | 4 | 5 |
| 31. | Cellular Biology | 1 | 2 | 3 | 4 | 5 |
| 32. | Plant Biology | 1 | 2 | 3 | 4 | 5 |
| 33. | Non-human Animal Biology | 1 | 2 | 3 | 4 | 5 |
| 34. | Human Biology | 1 | 2 | 3 | 4 | 5 |
| 35. | Microbiology | 1 | 2 | 3 | 4 | 5 |
| 36. | Genetics | 1 | 2 | 3 | 4 | 5 |

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|---|---|---|---|---|---|
| 37. Environmental Biology/Ecology | 1 | 2 | 3 | 4 | 5 |
| 38. Evolutionary Biology | 1 | 2 | 3 | 4 | 5 |
| 39. Developmental Biology | 1 | 2 | 3 | 4 | 5 |
| 40. Physiology | 1 | 2 | 3 | 4 | 5 |
| 41. Technical laboratory skills needed for advancement | 1 | 2 | 3 | 4 | 5 |
| 42. Experiences with the major changed my career objectives.
Please explain briefly: | 1 | 2 | 3 | 4 | 5 |

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|---|---|---|---|---|---|
| 43. Changes should be made in the major curriculum? | 1 | 2 | 3 | 4 | 5 |
| Please describe briefly: | | | | | |

44. Any additional comments?
