MARYMOUNT UNIVERSITY
Arlington, Virginia

STUDENT LEARNING ASSESSMENT REPORT

PROGRAM: Health Sciences (B.S.)
SUBMITTED BY: Jennifer L. Tripken, Department Chair and Assistant Professor, Department of Health and Human Performance
DATE: September 30, 2016
BRIEFLY DESCRIBE WHERE AND HOW ARE DATA AND DOCUMENTS USED TO GENERATE THIS REPORT BEING STORED: Documents are stored electronically and in hard copy at the desk of Dr. Jennifer Tripken, Malek School of Health Professions, Caruthers Hall, Room 2031, or in some cases with the instructor of the noted course.

EXECUTIVE SUMMARY

Program description from the Course Catalog: This undergraduate program, grounded in the Liberal Arts Core of the university, provides students resources for developing professional skills in exercise testing, physical activity leadership, health and fitness assessment, exercise programming, wellness coaching and health promotion. Graduates are prepared for beginning administrative, supervisory, and leadership positions in commercial and community health and athletic clubs, in corporate fitness and wellness programs, and for graduate study in health education, exercise science, occupational therapy, athletic training, chiropractic medicine, physical therapy and public health. In addition, qualified students may apply for an accelerated B.S. to M.S. program in Health Education and Promotion.

Students will choose from three emphasis areas: health promotion, pre-physical therapy, or pre-professional. Students completing the baccalaureate degree in Marymount's health sciences programs are prepared to apply for health fitness specialist (HFS) or Personal Trainer certifications by the American College of Sports Medicine (ACSM).

List all of the program's learning outcomes: *(regardless of whether or not they are being assessed this year)*

Learning Outcome	Year of Last Assessment	Assessed This Year	Year of Next Planned Assessment
Demonstrate the knowledge and skills required to function as competent entry-level professionals in the health/fitness industry as determined by the ACSM or to attend graduate school (physical therapy, occupational therapy, chiropractic) if they desire	2014-2015	No	2017-2018
Acquire and demonstrate competence in using technology-based and non-technology-based equipment, industry tools/inventories, and/or other practical "hands-on" applications pertaining to health both in the classroom and at off-campus settings as determined by the ACSM	2013-2014	No	2016-2017
Demonstrate the ability to effectively educate and/or counsel individuals regarding lifestyle modification	2014-2015	No	2017-2018

Successfully respond in a rational, sensitive, and critical thinking manner about values and ethics in the health and wellness field	2012-2013	Yes	2018-2019
Demonstrate an ability to use technology in the classroom, in designing and evaluating health promotion programs, and/or in the clinical setting	2013-2014	Yes	2018-2019
Gather, evaluate, and utilize appropriate information to address the health needs/concerns of individuals or groups	2013-2014	No	2016-2017

Describe how the program's outcomes support Marymount's mission, strategic plan, and relevant school plan:
The Health Science program is designed to prepare students for a career in the health and wellness industry. The program uses as its guiding principle recommendations set forth by the American College of Sports Medicine (ACSM) which is the premier organization in the field of health and fitness. ACSM offers several professional certifications, including the *ACSM Certified Personal Trainer and the Certified Exercise Physiologist* licensures, which presupposes a diversity of knowledge, skills, and abilities of the applicant and professional. Candidates who successfully complete the ACSM qualifications must have at least an Associate's Degree and are qualified to work with special populations with medically controlled diseases who have been cleared by their physician for independent exercise (www.acsm.org).

The Health and Human Performance (HHP) Department has used these recommended competencies in the development of learning objectives throughout the core health sciences curriculum. The above is in harmony with the MU mission of being "Committed to the liberal arts tradition, the University combines a foundation in the arts and sciences with career preparation and opportunities for personal and professional development. Marymount is a student-centered learning community that values diversity and focuses on the education of the whole person, promoting the intellectual, spiritual, and moral growth of each individual." Further, "Scholarship, leadership, service and ethics are hallmarks of a Marymount University education".

In January of 2011, the HHP Department moved into the new Malek School of Health Professions (Caruthers Hall). The HHP Department acquired its first ever HHP designated laboratory facility ("Kinesiology Lab", room 2034) which houses new state-of-the-art equipment which helps to foster an "academic vision that emphasizes intellectual rigor; outstanding instruction; state-of-the-art facilities, technology, and learning resources." The Health Sciences program strives to uphold and exceed industry standards by utilizing ACSM as its guiding organization to provide a "high-quality academic program(s) and a learning environment that promotes student success".

As with the School of Health Professions mission, the Health Sciences program has at its core a responsibility to follow the Malek School of Health profession's goals to promote:

(a) A scholarly climate that fosters critical thinking, creativity, ethical decision making, and self-directed lifelong learning in an environment where knowledge and research are valued;
(b) A prominent presence in the community by providing health care, health education and promotion, and continuing education offerings;
(c) Graduates who are competent health professionals prepared to contribute and respond to society's changing health needs; and;
(d) Respect for life, human development, and individual differences.

Each of the two learning outcomes assessed in this report target both the University and School of Health Professions mission and strategic plan.

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Provide a brief description of the assessment process used including strengths, challenges and planned improvements and provide evidence of the existence of a culture of continuous improvement based on assessment:

The process of assessment in the HHP Department involves input from adjuncts, full-time faculty and the chair. The chair manages to obtain a fairly good response from all levels of faculty teaching at both the undergraduate and graduate levels. The chair will continue to solicit adjunct faculty for increased input into the assessment process as well as improve dissemination of results by targeting specific faculty and/or courses for improvement/modification. A planned improvement for the assessment process is the setting up of an electronic database for tracking direct and indirect measures. The department hopes that an electronic database will increase participation from faculty and adjuncts in the assessment process and strengthen the evaluation of measures.

The HHP department keeps the learning outcomes for the program in mind when planning revisions, modifications and updates to curriculum and syllabi. The department also stays up to date with published recommendations and updates to information from the American College of Sports Medicine (ACSM). A planned improvement for the assessment process will be to review the learning outcomes biannually to ensure alignment of the outcomes with current offerings and changes to professional organizations.

Describe how the program implemented its planned improvements from last year:

Planned improvements that were noted in the 2014/2015 annual assessment report pertained to both the departmental learning outcomes as well as the program review from the 2011/2012 academic year. Hence, updates to both are listed below with appropriate outcome updates.

Planned improvements from the 2011/2012 Program Review report included:

Outcome	**Planned Improvement**	**Update** *(Indicate when, where, and how planned improvement was completed. If planned improvement was not completed, please provide explanation.)*
1. Full time faculty in the department	Increase the number of full-time faculty in the department by two (to five).	Achieved. One full time faculty member was added in the fall of 2013 taking the number to four. A budget request was made and approved for a new Tenure Track faculty in the 2014/2015 academic year and this position was filled at the end of the 2016 semester. Dr. Summerfield returned to the department faculty in Spring 2016. This brings our full time faculty to 6.
2. Departmental dedicated laboratory space	Increase HHP dedicated laboratory space.	Has not been completed. The current lab space in Caruthers Hall does not allow for any expansion of HHP facilities. Our program continues to grow and sustain a cohort that is at least 10% of each Freshman class annually yet no further laboratory facilities have been identified for HHP. The scale of laboratory facilities does not match the program size (~160 undergraduate students plus students in the minors). Our lab space can only accommodate 12 students comfortably at any given time and most classes have multiple sections of 15-20

		students which presents logistical issues. Nursing and Physical Therapy have multiple laboratory and learning spaces dedicated to their programs.
3. Program accreditation	Achieve CAAHEP accreditation for the program.	The chair has reviewed the latest guidelines from CAAHEP. Extra lab space and equipment would be needed in order to pursue accreditation (item 2).
4. HHP curriculum	Make curricular changes to support the program's quest for accreditation and to strengthen the learning experience and cohesiveness of the Health Sciences curriculum.	HPR 308 was approved as the department's first fully online course in the 2014/2015 academic year and ran with full capacity during the 2015-2016 academic year. The program continues to make appropriate updates to course content based on changes from the ACSM. The chair in conjunction with the Associate Dean maintains a constant review of program plans to ensure the most appropriate sequencing of courses.

Planned improvements from the 2014/2015 Learning Outcomes report included:

Outcome	**Planned Improvement**	**Update** *(Indicate when, where, and how planned improvement was completed. If planned improvement was not completed, please provide explanation.)*
Demonstrate the knowledge and skills required to function as competent entry-level professionals in the health/fitness industry as determined by the ACSM or to attend graduate school (physical therapy, occupational therapy, athletic training and chiropractic) if they desire.	Continue to engage students who are struggling by reaching out via various means. Continue to seek out new internship opportunities Continue to support and encourage career development opportunities for students	The department has an ongoing commitment to this learning outcome. Faculty are proficient in the use of Starfish as a means to communicate with students, including using the "flagging" system for early intervention for students who are struggling. The department also meets regularly to discuss student issues. As advisors, faculty are encourage to reach out to struggling students and provide them with resources available on campus. The department continues to seek out new internship relationships with organizations in the area and maintains a repository of internship opportunities on the department website for students (Blackboard). In addition, the department posts job opportunities as well. Undergraduate students were invited to an alumni panel event in the Fall 2015. This event offered students an opportunity to interact with graduates of the M.S. program and to receive information about internships and career opportunities in the field. This is an event that the department hopes to hold each year, as it was a valuable experience and well received.

		Additionally, the department faculty write letters of recommendation for many students each year and are encouraged to include internship and career advice during advising sessions.
Demonstrate the ability to effectively educate and/or counsel individuals regarding lifestyle modification	Incorporate more inquiry guided learning assignments/projects into the curriculum Continue to engage students in scholarly activities with faculty	There are a number of courses that are designated as INQ in the department (HPR 225, HPR 302, and HPR 415). Faculty are encouraged to incorporate inquiry guided learning assignments into all classes, not just the ones with INQ designation. Each semester, course syllabi are reviewed and faculty are encouraged to use resources on campus (CTL) to explore more inquiry style learning. There continues to be a high level of faculty-student research within the department. For example, in the Spring 2016, five students were enrolled in HPR 390 Capstone course. Of these, 2 students presented at the MU student research conference. This past year, department faculty mentored two Honors students, who successfully defended their theses in the Spring 2016. One honors student presented her work at the Society of Public Health Education (SOPHE) annual conference in Charlotte, NC.

Provide a response to last year's University Assessment Committee review of the program's learning assessment report:

Last year's report was accepted as submitted with all areas of review recorded as "acceptable". The department was satisfied with the feedback and supportive comments. Responses are included here, where necessary.

Feedback: I. Executive Summary*: The program meets most criteria at the acceptable level. More depth and detail on the strengths, challenges, etc. section might be useful to the program as well as its reviewers. The challenges are particularly important to address in light of the desire for accreditation.*

Response: The chair added more depth and detail to the strengths and planned improvements to overcome challenges associated with the assessment process.

Feedback: III. Outcomes: *The program meets the "Acceptable" level criteria. However, some revision in Outcomes 4 and 6. Outcome 4 – to whom the response on values should be made is unclear. Outcome 6 - Gathering, evaluating and utilizing information are 3 separate skills. The measurement of each may differ. This outcome may need to be split into multiple ones. If kept as one outcome, make sure the assessment process assess each of the three skills, perhaps using a detailed rubric.*

Response: The department plans to review and revise these learning outcomes in the upcoming year.

Feedback: Assessment Measures and Targets: *The measurement standards for a number of measures are not stated. For example, in Outcome 1 what percentage of students will reach a level of "3 or above"?*

Response: Current targets are that the majority of students will achieve at least a 3 or above on internship and able or above in other learning indices based on the chair generated learning proficiency report. The department will discuss and implement as necessary actual target percentages of students to achieve at least a 3 on specified measures in future assessments and/or 'raise the bar' on certain outcome expectations to enhance rigor in the curriculum.

Feedback: Analysis of Results and Implications: *There is a wealth of data. The description of the findings is detailed. The analysis of causes or correlations appears limited. For example, the decision that any deficiencies in meeting course standards is due to student lack of engagement and any negative feedback on job finding is due to the economy. An opportunity exists for the program to more deeply analyze the causes of student dis-engagement and find ways of engaging the majors. Although the economy is outside the program's control, the opportunity exists to find ways to make the program graduates more attractive job candidates.*

Response: The department will explore other means to assess deficiencies in meeting course standards, including holding periodic focus groups with students and course specific evaluations, in addition to university evaluations.

Feedback: *The program has shown improvements over time. In the spirit of continuous improvement, after celebrating what has been achieved, a future focus on reaching the next level might benefit the program and its pursuit of accreditation. The UAC is sensitive to the needs to meet the reporting requirements for accreditation self-studies as well as the UAC. Please consult the Assessment Director on ways of reducing redundancy in both pursuits.*

Response: The chair plans to meet with the Assessment Director to reduce redundancy and to increase efficiency in reporting.

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Outcomes Assessment 2015-2016

Learning Outcome 1: Successfully respond in a rational, sensitive, and critical thinking manner about values and ethics in the health and wellness field
Courses: 201, 202, 260, 302, 415

Assessment Activity

Outcome Measures *Explain how student learning will be measured and indicate whether it is direct or indirect.*	**Performance Standard** *Define and explain acceptable level of student performance.*	**Data Collection** *Discuss the data collected and student population*	**Analysis** *1) Describe the analysis process.* *2) Present the findings of the analysis including the numbers participating and deemed acceptable.*
UG internship evaluation (indirect and direct)	A rating of "average" (3) or higher on the internship performance scale.	Internship supervisor performance review (rubric attached) and site evaluation as applicable for health sciences majors.	The designated internship supervisor consults with the internship supervisor for each student and determines a grade of pass or fail using input from the performance evaluation scale and subjective feedback from the site supervisor. Thirty eight (38) students undertook an internship over the Fall 2015, and Spring and Summer 2016 semesters. Performance evaluations provided by the student's supervisor using an established rubric (see appendix 3) on a 5 pt. scale by their site supervisor were reviewed using several categories of competencies including service delivery, professional conduct, communication skills, and health/fitness knowledge. Within this rubric, two competencies align with this learning outcome: *incorporating the practice of ethical standards* and *courtesy and consideration in communicating with clients*. 100% of student were rated as 4 "good" or 5 "excellent" in each of these competencies. Clearly, this indicates a high level of proficiency for this learning outcome.
Proficiency reports (rubric and grade reports in experiential classes) (direct)	A rating of "able" (3) or higher on a Chair generated proficiency report rubric and, using the same rubric, a	A rubric (template attached) was generated and used to determine proficiency on comprehensive assignments	One particular assignment in **HPR 201** focused on this learning outcome which had students undertake and prepare a lab report based on a body composition lab experience. Results for this test must be conveyed in a

	demonstrated improvement for this outcome when comparing student work from mid-level (HPR 201) vs. upper-level (HPR 302) core classes. Grade reports are also included here for core courses with significant experiential components.	in targeted classes. In addition, students in classes with a significant experiential component must obtain a grade of C- or better in order to progress onto the next unit (experiential component).	manner that is sensitive to the individual which incorporates a rational and critical thinking approach. Students were instructed to perform a mock analysis of test results and convey the results to a partner. The instructor of the course was present during this mock exercise. Instruction was provided on how to successfully approach this exercise and 55 students were evaluated for this learning outcome. All told, 51 of 55 students (93%) were able or very able to achieve this learning outcome. There was no observation on 4 students who simply did not show on the day of the exercise, and thus they were penalized on their grade for the assignment. In the future, additional assignments will be address this learning outcome for additional exposure in these freshmen students. In **HPR 202**, a case study assignment regarding Ergogenic Aids (doping in sports) asked students to review two high profile cases from the media concerning athletes who had been banned for doping in their sport (elite athletes). They then had to conduct their own literary review on the substance that the athlete was accused of doping to identify the rationale for why (physiologically) this was an attractive doping technique for this sport. Students then had to give a critical rationale for why the athlete chose to dope, the expected benefits and whether the substance/method should be legal or illegal for this sport. Students had to discuss the concept of fairness and an 'equal playing field' regarding if this should be banned or legalized. In total, 20 students were evaluated for this learning outcome and 16 of the 20 students (80%) were at least able to achieve this learning outcome with a rating of 3 (able) or above. 13 students from the 20 (65%) were rated as 4 (very able). Of the four students who received a below able rating, one student received a 1 or below as they failed to turn in the work despite multiple reminders.

			In **HPR 260,** a field project was assigned that consisted of a visit to a health professional in practice. Students then had to write a paper describing and explaining the experience. This assignment addresses the learning outcomes as students were asked to observe and describe the principles of the interaction process between patient and practitioner and observe and describe the code of conduct by the practitioner and the proper injury/illness assessment methods and physical tests. In total, 40 students were evaluated for this learning outcome and 37 (93%) were rated as a 3 or above (at least able). 16 of the 40 students (40%) were rated a 4 or above (very able) as they provided a thorough explanation of the values and ethics by the practitioner during the observational visit. No student received a 1 or a zero. Overall, there was a high level of competency for this learning outcome in this course. As many students in this course were performing an observational visit for the first time, students show a basic level understanding/ability to describe the ethics and standards for the injury/illness assessment methods and physical tests performed by the physician. Most students were able to provide a undergraduate level description on their topic In **HPR 302,** the final exam addressed this learning outcome. The final exam was a practical (hands on) skills evaluation whereby students led a client through the entire process of a health assessment and then interpreted and disseminated the results of the testing to the client in a written and verbal format. This assignment addresses the learning outcome as students had to demonstrate the appropriate use of personal demographic and medical history data and the confidentiality of its handling, appropriate personal and professional conduct when interacting with a client, appropriate use and storage of confidential data, and exhibit professionalism in

			interpreting information back to a client. In total, 16 students were evaluated for this learning outcome and 15 (93.75%) of students were rated as a 3 or above (at least able). 10 of the 16 students (66.6%) were rated as very able. The ten students receiving the highest grades in this assignment exhibited the strongest practical skills during the exam, leading their designated section of the exam with confidence, professionalism and following the protocol per the step by step procedures (industry standards). No students received a 1 or 0 but one student had less than a C grade for their practical exam. This student was unprepared, couldn't provide a strong, clear verbal description of her section of the exam and lacked professionalism in dealing with her client. Overall, there was a high standard of engagement and participation with this section of HPR 302. Several assignments in **HPR 415** required students to address this learning outcome. One assignment in particular heavily focused on this learning outcome where students in small groups undertook a practical exam in performing a clinical exercise test. A component of the assignment is to convey the results of the test in a 'real-world' sense in a manner that is sensitive and ethical. In total, 40 students were evaluated for this learning outcome and through preparation during the semester, all 40 students (100%) were able or very able to achieve this outcome. This course is designated both a writing intensive and inquiry course, and as such, critical thinking is requisite for the successful completion for all assignments, including the final practical exam mentioned above. HPR 415 is considered the capstone/cumulative and applied learning experience in the program and so expectations of students being able to achieve this

			learning outcome are high. Outcomes demonstrated here do correlate well with a highly satisfactory standard of entry-level preparation regarding rational, sensitive, and critical thinking about values and ethics in the health and wellness field.
Alumni and Student Surveys (indirect) and Certification Results (direct)	A majority of responses indicate positive ratings (good to excellent) on surveys. Pass rate on certification exams.	Alumni, graduating student, and exit surveys (template attached) were distributed to health sciences students in order to determine satisfaction, preparation, and areas for improvement within the health sciences program.	Alumni survey results (n=13) revealed an overall high percentage of students indicating that they were good to excellent in their ability to *determine the most ethically appropriate response to a situation (76.9% of respondents, decreasing from 85.7% in 2012/2013), understand major ethical dilemmas in your field (76.9%, increasing from 71.4% in 2012/2013), apply knowledge and skills to new situations (76.9%, decreasing from 85.7% in 2012/2013), and solve problems in your field (75%, decreasing from 85.7% in 2012/2013).* Similarly, the graduating student survey (n=38) revealed an even higher percentage of students indicating that they were good to excellent in their ability to *determine the most ethically appropriate response to a situation (84.2% of respondents), understand major ethical dilemmas in your field (84.2%), apply knowledge and skills to new situations (89.5%), and solve problems in your field (86.8%).*

Interpretation of Results

Extent this learning outcome has been achieved by students *(Use both direct and indirect measure results)***:**

Internship Evaluation: Internship evaluations demonstrate that the MU Health Sciences major has a well-developed ability to think rationally and ethically in new situations. The Health Sciences program uses the ACSM HFS KSA's as a basis for learning objectives in core courses and has targeted values and ethics as a critical learning outcome for students. The process of analysis for the internship evaluation is such that the designated internship supervisor consults with the internship supervisor for each student and determines a grade of pass or fail using input from the performance evaluation scale and subjective feedback from the site supervisor. In some cases, the internship supervisor performs a site visit to observe students at their internship and to confirm adequate preparation

of students necessary to perform their internship duties. Thirty eight (38) students undertook an internship over the Fall 2015, and Spring and Summer 2016 semesters.

Performance evaluations provided by the student's supervisor using an established rubric (see appendix 3) on a 5 pt. scale by their site supervisor were reviewed using several categories of competencies including service delivery, professional conduct, communication skills, and health/fitness knowledge. Within this rubric, two competencies aligned with this learning outcome: *incorporating the practice of ethical standards* and *courtesy and consideration in communicating with clients*. 100% of student were rated as 4 "good" or 5 "excellent" in each of these competencies. Clearly, this indicates a high level of proficiency for this learning outcome.

Proficiency Reports:

One particular assignment in **HPR 201** focused on this learning outcome which had students undertake and prepare a lab report based on a body composition lab experience. Results for this test must be conveyed in a manner that is sensitive to the individual which incorporates a rational and critical thinking approach. Students were instructed to perform a mock analysis of test results and convey the results to a partner. The instructor of the course was present during this mock exercise. Instruction was provided on how to successfully approach this exercise and 55 students were evaluated for this learning outcome. All told, 51 of 55 students (93%) were able or very able to achieve this learning outcome. There was no observation on 4 students who simply did not show on the day of the exercise, and thus they were penalized on their grade for the assignment. In the future, additional assignments will be address this learning outcome for additional exposure in these freshmen students.

In **HPR 202**, a case study with critical thinking questions was assigned on Ergogenic Aids (doping in sports) that addressed this learning outcome. Students had to review two high profile cases from the media concerning athletes who had been banned for doping in their sport (elite athletes). They then had to conduct their own literary review on the substance that the athlete was accused of doping to identify the rationale for why (physiologically) this was an attractive doping technique for this sport. Students then had to give a critical rationale for why the athlete chose to dope, the expected benefits and whether the substance/method should be legal or illegal for this sport. Students had to discuss the concept of fairness and an 'equal playing field' regarding if this should be banned or legalized. Students receiving the higher scores (85% or above) were able to find scientific information and data from peer reviewed journals to rationalize why this substance/method would improve human performance function in athletes and were also able to critically evaluate the risk versus the benefits of this approach (physiologically and psychologically). Further, students achieved a higher level of learning if they connected the ethical challenges of elite athletics (pressure of winning at 'all costs') with the incidence rates of doping in this sport, highlighted by other high profile cases in recent years as well as the outcomes of those cases. The best papers also included a discussion of the ethical challenge of doping with critical input based on fact as well as opinion. In total, 20 students were evaluated for this learning outcome and through preparation during the semester, 16 of the 20 students (80%) were able or very able to achieve this outcome. 13 students from the 20 (65%) were rated as 4 (very able). Of the four students who received a below able rating, one student received a 1 or below as they failed to turn in the work despite multiple reminders. Overall, students seemed to enjoy this format of assignment and it was a new assignment format for the 2016 academic year. Using recent actual cases from the media seemed to enable many students to connect theory and real world application and they liked the use of media to gather information (news interviews, articles from newspapers and governing body statements). The majority of students were able to critically evaluate information and use it to make an informed opinion on the subject matter.

In **HPR 260,** a field project was assigned that consisted of a visit to a health professional in practice. Students then had to write a paper describing and explaining the experience. This assignment addresses the learning outcomes as students were asked to observe and describe the principles of the interaction process between patient and practitioner and observe and describe the code of conduct by the practitioner and the proper injury/illness assessment methods and physical tests. In total, 40 students were evaluated for this learning outcome and 37 (93%) were rated as a 3 or above (at least able). 16 of the 40 students (40%) were rated a 4 or above (very able) as they provided a thorough explanation of the values and ethics by the practitioner during the observational visit. No student received a 1 or a zero. For many students, this assignment was the first time they were asked to perform observational visit. Most students show a basic level understanding and ability to describe the ethics and standards for the injury/illness assessment methods and physical tests performed by the physician. Overall, there was a high level of competency for this learning outcome in this course.

In **HPR 302,** the final exam addressed this learning outcome. The final exam was a practical (hands on) skills evaluation whereby students led a client through the entire process of a health assessment including the measurement and evaluation of medical history, blood pressure and pulse (vital signs), cardiovascular and muscular fitness, flexibility and body composition. At the conclusion of the evaluation, students must interpret and disseminate the results of the testing to the client in a written and verbal format. Students are graded on their ability to properly follow a sequential protocol of methods for each test and their ability to answer questions from the client and explain the procedures clearly to the client (including gaining informed consent to participate and identifying risk factors that would prevent safe exercise participation and increase risk for CVD). This assignment addresses the learning outcome as students had to demonstrate the appropriate use of personal demographic and medical history data and the confidentiality of its handling, demonstrate appropriate personal and professional conduct when interacting with a client, demonstrate appropriate use and storage of confidential data, and exhibit professionalism in interpreting information back to a client. In total, 16 students were evaluated for this learning outcome and 15 (93.75%) of students were rated as a 3 or above (at least able). 10 of the 16 students (66.6%) were rated as very able. The ten students receiving the highest grades in this assignment exhibited the strongest practical skills during the exam, leading their designated section of the exam with confidence, professionalism and following the protocol per the step by step procedures (industry standards). No students received a 1 or 0 but one student had less than a C grade for their practical exam. This student was unprepared, couldn't provide a strong, clear verbal description of her section of the exam and lacked professionalism in dealing with her client. This student had missed the maximum number of classes and had thus failed to practice and refine her lab skills and patient client interaction methods. Overall, there was a high standard of engagement and participation with this section of HPR 302. Students that participate the most readily in laboratory tend to receive the better grades because they are able to refine their interpersonal skills and have confidence in following procedures as expected by industry standard protocols. Student's ability to conduct themselves professionally also includes their handling of sensitive personal information and medical history from their chosen client who is a stranger. Students are offered both in and out of class lab time to rehearse their skills and effectively reduce the impact of nervousness on the day of the final exam. Some students take the opportunity to refine their skills to the highest possible level whilst others do not engage as readily in lab-despite knowing that they will all be evaluated on their hands on skills at the end of the semester. Some students are already working as coaches, personal trainers and PT aides and these students typically exhibit a higher level of mastery of these skills and ethical conduct expectations.

Several assignments in **HPR 415** required students to address this learning outcome. One assignment in particular heavily focused on this learning outcome where students in small groups undertook a practical exam in performing a clinical exercise test. A component of the assignment is to convey the results of the test in a 'real-world' sense in a manner that is sensitive and ethical. In total, 40 students were evaluated for this learning outcome and through preparation during the semester, all 40 students (100%) were able or very able to achieve this outcome. This course is designated both a writing intensive and inquiry course, and as such, critical thinking is requisite for the successful completion for all assignments, including the final practical exam. HPR 415 is considered the

capstone/cumulative and applied learning experience in the program and so expectations of students being able to achieve this learning outcome are high. Outcomes demonstrated here do correlate well with a highly satisfactory standard of entry-level preparation regarding rational, sensitive, and critical thinking about values and ethics in the health and wellness field.

Alumni and Graduating Student Surveys: Alumni survey results (n=13) revealed an overall high percentage of students indicating that they were good to excellent in their ability to *determine the most ethically appropriate response to a situation (76.9% of respondents), understand major ethical dilemmas in your field (76.9%), apply knowledge and skills to new situations (76.9%), and solve problems in your field (75%).* The alumni survey for health sciences revealed higher percentages for two items related to this learning outcome when compared to the university as a whole, as presented in the following table:

Item	**Alumni Survey for Health Sciences**	**Alumni Student Survey for the University**
Determine the most ethically appropriate response to a situation	76.9	76.8
Understand major ethical dilemmas in your field	76.9	73.2
Apply knowledge and skills to new situations	76.9	78
Solve problems in your field	75	76.3

Similarly, the graduating student survey (n=38) revealed an even higher percentage of students indicating that they were good to excellent in their ability to *determine the most ethically appropriate response to a situation (84.2% of respondents), understand major ethical dilemmas in your field (84.2%), apply knowledge and skills to new situations (89.5%), and solve problems in your field (86.8%).* The graduating student survey for health sciences revealed higher percentages for all items related to this learning outcome when compared to the university as whole, as presented in the following table:

Item	**Graduating Student Survey for Health Sciences**	**Graduating Student Survey for the University**
Determine the most ethically appropriate response to a situation	84.2	82.3
Understand major ethical dilemmas in your field	84.2	82
Apply knowledge and skills to new situations	89.5	82.3
Solve problems in your field	86.8	82.8

This highlights a good deal of satisfaction with alumni and graduating students regarding their ability to respond in a rational, sensitive, and critical thinking manner to ethically challenging situations in the health and wellness fields.

Program strengths and opportunities for improvement relative to assessment of outcome:
In the area of critical thinking skills about values and ethics in the health and wellness field, it is clear from the alumni and graduating student survey that students have acquired these skills in the program. Several ACSM HFI KSA's address ethical situations in health and wellness through maintaining client confidentiality, having cultural and population-specific awareness, being aware of violations to professional practice, referring clients when medical clearance is required prior to exercise participation, and in discussing at times sensitive personal materials. In general, students rated these skills as higher than the

university. However, there is room for improvement in several areas, including the ability to solve problems in the field and in applying knowledge and skills to new situations.

Analysis of student assignments as above reveals that most students have demonstrated proficiency in their ability to respond in a rational, sensitive, and critical thinking manner to ethically challenging situations in the health and wellness fields. In the cases of students not achieving this proficiency, it was attributed to their lack of participation and attendance rather than a lack of understanding or instruction. The courses chosen for this learning outcome reflected the spectrum of courses offered throughout the program, from the 200-level to the 400-level. It is expected that students develop a foundation for critical thinking about ethics and values in the lower level courses and apply these skills in the upper level courses. As reflected in the culminating internship course, 100% of students were rated as proficient in this learning outcome. This is indicative of the development of these skills throughout the program.

The program will continue to integrate, wherever possible, an ethical component throughout the Health Sciences major curriculum and Public Health/Health Sciences minors in order to best prepare graduating students to be conscious and competent with regard to values and ethics in their field. Several faculty in the department have participated in the Ethics I Seminar, held yearly over the summer, which has served to strengthen the curriculum as well. Faculty who have taken this seminar will continue to reflect upon and share their assignments and coursework with the rest of the department to encourage assignments that stimulate critical thinking and problem solving abilities thereby exhibiting in students the skills of fair-mindedness and thoughtful analysis (e.g., case studies).

Discuss planned curricular or program improvements <u>for this year based on assessment of outcome:</u>
Based on this assessment of the learning outcome, the Chair will make a concerted effort to continue to have faculty incorporate inquiry guided learning assignments/projects pertaining to the moral and ethical conduct considerations of the health science field and client-practitioner interaction/professionalism (e.g., role play, case studies, stories from the media) into classes. While the majority of faculty are already taking this approach, it is imperative to reflect upon current assignment to align with the learning outcome and current ACSM guidelines. In addition, the faculty who have taken the Ethics I Seminar will be asked to share their experiences and outcomes, including how they incorporate ethics into their coursework.

Coursework will continue to be analyzed for inclusion and development of this learning outcome in all core classes, from the 200-level to the 400-level. Tracking the development of the learning outcome throughout the program will provide further evidence of the HPR curriculum meeting specific learning outcomes as well as documenting areas for curricular or program improvement.

MARYMOUNT UNIVERSITY
Arlington, Virginia

Learning Outcome 2: Demonstrate an ability to use technology in the classroom, in designing and evaluating health promotion programs, and/or in the clinical setting
Courses: 201, 300, 302, 415

Assessment Activity

Outcome Measures *Explain how student learning will be measured and indicate whether it is direct or indirect.*	**Performance Standard** *Define and explain acceptable level of student performance.*	**Data Collection** *Discuss the data collected and student population*	**Analysis** *1) Describe the analysis process.* *2) Present the findings of the analysis including the numbers participating and deemed acceptable.*
UG internship evaluation (indirect and direct)	A rating of "average" (3) or higher on the internship performance scale.	Internship supervisor performance review (rubric attached) and site evaluation as applicable for health sciences majors.	The designated internship supervisor consults with the internship supervisor for each student and determines a grade of pass or fail using input from the performance evaluation scale and subjective feedback from the site supervisor. Thirty eight (38) students undertook an internship over the Fall 2015, and Spring and Summer 2016 semesters. Performance evaluations provided by the student's supervisor using an established rubric (see appendix 3) on a 5 pt. scale by their site supervisor were reviewed using several categories of competencies including service delivery, professional conduct, communication skills, and health/fitness knowledge. Within this rubric, three competencies align with this learning outcome: *quality of materials produced by the student (technology requirements), skill conducting client screening and health appraisal,* and *knowledge of fitness assessment procedures*. When disregarding "no observation" on the internship evaluation scale, supervisor evaluations rated interns as performing 4 "good" or 5 "excellent" in each of these competencies for 100% of students. Clearly, this indicates a high level of proficiency for this learning outcome.

Proficiency reports (rubric and grade reports in experiential classes) (direct)	A rating of "able" (3) or higher on a Chair generated proficiency report rubric and, using the same rubric, a demonstrated improvement for this outcome when comparing student work from mid-level (HPR 201) vs. upper-level (HPR 302) core classes. Grade reports are also included here for core courses with significant experiential components.	A rubric (template attached) was generated and used to determine proficiency on comprehensive assignments in targeted classes.	**HPR 201** utilizes technology both in the classroom and in laboratory experiences. Several assignments utilized conventional technology as well as more industry specific technology in lab. For example, all students wrote research papers on a unique topic which culminated in an end of semester presentation using technology. Whether through Blackboard or Prezi, students utilized technology to disseminate information about their research papers. In addition, HPR 201 inherently explores a variety of laboratory equipment that these freshman will experience in much greater depth as they matriculate in the program. Assignments had students utilize equipment, generate results, and discuss the implications of the results in lab reports. When considering the above assignments, all 55 students (100%) were able or very able to present their research paper, and 51 of 55 (93%) of students gained experience in utilizing laboratory equipment (with a discussion of results). All 55 students (100%) at some point gained experience utilizing laboratory based equipment in the field. As such, most students were able or very able to achieve this learning outcome. In **HPR 300,** student achieved this learning outcome in a paper and presentation on developing appropriate short and long term goals for personal training clients that were realistic, scientific and measureable. This assignment achieved the learning outcome as students used a variety of equipment and different computer programs in order to evaluate and present their results. In total, 33 students were evaluated for this learning outcome. 31 of the 33 students (94%) were rated as a 3 or above (at least able). 20 of the 33 students (61%) were rated as a 4 of above (very able). These students demonstrated a high proficiency with the use of equipment and their presentations demonstrated a high ability to use video and other technology. Only 1 student had a score of zero (3%)

			because he did not show up and did not try to make up for the missed assignment. In **HPR 302,** students achieved this learning outcome through the final exam, which is a practical (hands on) skills evaluation whereby they lead a client through the entire process of a health assessment including the measurement and evaluation of medical history, blood pressure and pulse (vital signs), cardiovascular and muscular fitness, flexibility and body composition. Students are graded on their ability to properly follow a sequential protocol of methods for each test, using various pieces of technology and non-technology based equipment (e.g. metabolic testing cart, heart rate monitors, stethoscope and sphygmomanometer, weighing scales, skinfold calipers, tape measures, metronome, aerobics step, cycle ergometer, treadmill, and goniometer). This assignment addressed this learning outcome as students had to correctly identify the equipment to be used for the test and calibrate as necessary and place it appropriately on the body (set up) of your subject. Students also had to explain the test and execute it following the correct protocol- intervene to correct as necessary for incorrect technique or form or malfunction of the equipment. Additionally, students had to correctly interpret the data appropriately using ACSM standard tables and other such normative data. In total, 16 students were evaluated for this learning outcome. 15 of the 16 students (93.75%) were rated as a 3(able) or above on this assignment. Ten students (66.6%) were rated as 4 (very able). No students received a 1 or 0 but one student had less than a C grade for their practical exam. This student had missed the maximum number of classes and had thus failed to practice and refine her lab skills, making errors such as marking the wrong site for skinfolds assessment and following incorrect protocol for the measurement of the skinfold. Overall, most students

			were able to at least demonstrate a good level of skill in this section of the course. Students have a significant amount of time in this course to familiarize themselves with the use of technology based equipment and the appropriate procedures to enable the gathering of reliable human performance data. **HPR 415** heavily utilizes technology both in the classroom and in laboratory experiences. As a designated WI course, students worked individually and in small groups during each class to write on a pre-selected topic on the theme of the course, "Performing a Clinical Exercise Test." Part of an assignment was to discover/research the steps in performing an exercise test which culminated in a practical exam. The practical exam utilized brand new state of the art equipment which all students were exposed to during the semester. Each student was instructed to include the brand of equipment and their experiences on their resumes. Forty (40) students were evaluated for this learning outcome and over the course of the semester, 38 of 40 students (95%) were able or very able to achieve this outcome using multiple assignments. The two students (5%) who failed to achieve this outcome failed to turn in several assignments. Several students commented that additional time should be given to practice using lab technology, however, practice among groups was self-paced and certainly some groups were more prepared than others. Group dynamics also played a role in the successful completion of this outcome.
Alumni and Student Surveys (indirect) and Certification Results (direct)	A majority of responses indicate positive ratings (good to excellent) on surveys. Pass rate on certification exams.	Alumni, graduating student, and exit surveys (template attached) were distributed to health sciences students in order to determine satisfaction, preparation, and areas for improvement within the health sciences program.	Alumni survey results (n=13) revealed an overall high percentage of students indicating that they were good to excellent in their ability to *use technology effectively in a workplace environment (76.9%).* Similarly, the graduating student survey (n=38) revealed an even higher percentage of students indicating that they

			were good to excellent in their ability to *use technology effectively in the workplace (84.2%).*

Interpretation of Results

Extent this learning outcome has been achieved by students *(Use both direct and indirect measure results)***:**

Internship Evaluation: The designated internship supervisor consults with the internship supervisor for each student and determines a grade of pass or fail using input from the performance evaluation scale and subjective feedback from the site supervisor. In some cases, the internship supervisor performs a site visit to observe students at their internship and to confirm adequate preparation of students necessary to perform their internship duties. Thirty eight (38) students undertook an internship over the Fall 2015, Spring 2016, and Summer 2016 semesters.

Performance evaluations provided by the student's supervisor using an established rubric (see appendix 3) on a 5 pt. scale by their site supervisor were reviewed using several categories of competencies including service delivery, professional conduct, communication skills, and health/fitness knowledge. Within this rubric, three competencies align with this learning outcome: *quality of materials produced by the student (technology requirements), skill conducting client screening and health appraisal, and knowledge of fitness assessment procedures*. When disregarding "no observation" on the internship evaluation scale, supervisor evaluations rated interns as performing 4 "good" or 5 "excellent" in each of these competencies for 100% of students. Clearly, this indicates a high level of proficiency for this learning outcome.

Proficiency Reports:

HPR 201 utilizes technology both in the classroom and in laboratory experiences. Several assignments utilized conventional technology as well as more industry specific technology in lab. For example, all students wrote research papers on a unique topic which culminated in an end of semester presentation using technology. Whether through Blackboard or Prezi, students utilized technology to disseminate information about their research papers. In addition, HPR 201 inherently explores a variety of laboratory equipment that these freshman will experience in much greater depth as they matriculate in the program. Assignments had students utilize equipment, generate results, and discuss the implications of the results in lab reports. When considering the above assignments, all 55 students (100%) were able or very able to present their research paper, and 51 of 55 (93%) of students gained experience in utilizing laboratory equipment (with a discussion of results). All 55 students (100%) at some point gained experience utilizing laboratory based equipment in the field. As such, most students were able or very able to achieve this learning outcome.

In **HPR 300,** students achieved this learning outcome in a paper and presentation on developing appropriate short and long term goals for personal training clients that were realistic, scientific and measureable. This assignment achieved the learning outcome as students used a variety of equipment and different computer programs in order to evaluate and present their results. In total, 33 students were evaluated for this learning outcome. 31 of the 33 students (94%) were rated as a 3 or above (at least able). 20 of the 33 students (61%) were rated as a 4 of above (very able). These students demonstrated a high proficiency with the use of equipment and their presentations demonstrated a high ability to use video and other technology. Only 1 student had a score of zero (3%)

because he did not show up and did not try to make up for the missed assignment. Overall, the majority of students provided knowledge of appropriate use of technology in the clinical setting and in presenting their findings.

In **HPR 302,** students achieved this learning outcome through the final exam, which is a practical (hands on) skills evaluation whereby they lead a client through the entire process of a health assessment including the measurement and evaluation of medical history, blood pressure and pulse (vital signs), cardiovascular and muscular fitness, flexibility and body composition. Students are graded on their ability to properly follow a sequential protocol of methods for each test, using various pieces of technology and non-technology based equipment (e.g. metabolic testing cart, heart rate monitors, stethoscope and sphygmomanometer, weighing scales, skinfold calipers, tape measures, metronome, aerobics step, cycle ergometer, treadmill, and goniometer). This assignment addressed this learning outcome as students had to correctly identify the equipment to be used for the test and calibrate as necessary and place it appropriately on the body (set up) of your subject. Students also had to explain the test and execute it following the correct protocol- intervene to correct as necessary for incorrect technique or form or malfunction of the equipment. Additionally, students had to correctly interpret the data appropriately using ACSM standard tables and other such normative data. In total, 16 students were evaluated for this learning outcome. 15 of the 16 students (93.75%) were rated as a 3(able) or above on this assignment. Ten students (66.6%) were rated as 4 (very able). No students received a 1 or 0 but one student had less than a C grade for their practical exam. This student was unprepared, couldn't provide a strong, clear verbal description of her section of the exam and lacked professionalism in dealing with her client. This student had missed the maximum number of classes and had thus failed to practice and refine her lab skills and patient client interaction methods. Examples of errors included marking the wrong site for skinfolds assessment and following incorrect protocol for the measurement of the skinfold and giving an incorrect score for the client that was not within a certain degree of agreement with test scores for this client that were obtained by the instructor prior to the exam. The correct anatomical landmark identification (placement of the calipers) is a key skill in this test. The student's grade in this class is a composite score of both their ability to use the equipment correctly as well as their ability to execute and interpret the test scores/outcomes to the client. Some students are less skilled in the hands on aspect of this assignment, failing to follow the protocol step by step for set up and execution of the test (e.g. not adding the correct load to the cycle ergometer during the cardio fitness test, or setting the metronome to the wrong pace during a step test, or failing to place the heart rate monitor strap in the correct location, or failing to take skinfolds on the right side of the body and at the correct anatomical landmark site.) Such errors demonstrate less mastery of key skills that are expected in the students overall learning outcomes for the program. Such outcomes relate to the KSA's as defined by the ACSM for the Personal Trainer and Exercise Physiologist licensure. Most students were able to at least demonstrate a good level of skill in this section of the course with two thirds of the class being highly proficient. Students have a significant amount of time in this course to familiarize themselves with the use of technology based equipment and the appropriate procedures to enable the gathering of reliable human performance data. The students that received the lower scores in this assignment had less focus in class and also were disadvantaged by being over nervous and clumsy on the day of their exam. If the instructor has to correct errors for safety reasons or if they fail to follow protocol they lose points from their final score. Again, practice leads to mastery of such skills and the students who missed lab or did not stay to practice with their groups exhibited the least competency in the use of equipment to evaluate health status and fitness. Some students are already very experienced in this area of competency and other dedicate the appropriate amount of practice time into refining the skills- such students gain the higher grades for mastery of the learning outcome.

HPR 415 heavily utilizes technology both in the classroom and in laboratory experiences. As a designated WI course, students worked individually and in small groups during each class to write on a pre-selected topic on the theme of the course, "Performing a Clinical Exercise Test." Part of an assignment was to discover/research the steps in performing an exercise test which culminated in a practical exam. The practical exam utilized brand new state of the art equipment which all students were exposed to during the semester. Each student was instructed to include the brand of equipment and their experiences on their resumes. Forty (40) students were evaluated for this learning outcome and over the course of the semester, 38 of 40 students (95%) were able or very

able to achieve this outcome using multiple assignments. The two students (5%) who failed to achieve this outcome failed to turn in several assignments. Several students commented that additional time should be given to practice using lab technology, however, practice among groups was self-paced and certainly some groups were more prepared than others. Group dynamics also played a role in the successful completion of this outcome.

Alumni and Graduating Student Surveys: Alumni survey results (n=13) revealed an overall high percentage of students indicating that they were good to excellent in their ability to *use technology effectively in a workplace environment (76.9%).* The alumni survey for health sciences revealed a higher percentage for the item related to this learning outcome when compared to the university as a whole, as presented in the following table:

Item	**Alumni Survey for Health Sciences**	**Alumni Student Survey for the University**
Use technology effectively in a workplace environment	76.9	66.3

Similarly, the graduating student survey (n=38) revealed an even higher percentage of students indicating that they were good to excellent in their ability to *use technology effectively in the workplace (84.2%).* The graduating student survey for health sciences revealed a higher percentage for the item related to this learning outcome when compared to the university as whole, as presented in the following table:

Item	**Graduating Student Survey for Health Sciences**	**Graduating Student Survey for the University**
Use technology effectively in a workplace environment	84.2	79

This highlights a good deal of satisfaction with alumni and graduating students regarding their ability to use technology effectively in a workplace environment.

Program strengths and opportunities for improvement relative to assessment of outcome:
It is apparent from the alumni and graduating student surveys that students graduating from the health sciences program have a strong skill set in the use of technology as it pertains to the workplace environment. Most courses in the Health Sciences program include a technology component, which might be an explanation of the high level of proficiency that alumni and graduating students report for the use of technology.

Analysis of student assignments as above reveals that most students have demonstrated proficiency in the use of technology. The courses in the program inherently have strengths of developing competency in the use of traditional and novel approaches to the application of technology as an avenue for the delivery of health related information. As students matriculate in the Health Sciences program, there is the requirement of increasing level of skill development as they progress from the 200-level courses to the 400-level courses. This is evidenced quite well when students move from HPR 201 to 302 and to 415, where students start with the fundamental understanding of laboratory equipment and progress to use that program to design health programs in the upper level courses. Improvements in the use of technology in the health and wellness fields are dependent on the use of current industry tools and resources. The Kinesiology Lab in Caruthers Hall (room 2034) provides a sample of several technology based laboratory equipment, such as treadmills, heart rate monitors, automated blood-pressure cuffs, and other physiological tools including sphygmomanometers, stethoscopes, goniometers, and skinfold calipers. Numerous courses in the program utilize this equipment (HPR 201, 202, 260, 300, 302, 340, 345, and 415). As such, it is not surprising that students are rated

as proficient in this learning outcome due to their continued exposure throughout the program. Students in the program are encouraged to consider professional certification from ACSM, which requires proficiency in several technology areas such as the use of laboratory equipment. As more students seek this certification, opportunities for improvement will become clearer.

Discuss planned curricular or program improvements <u>for this year based on assessment of outcome:</u>

The Chair will continue to work with faculty to encourage the utilization of technology-based learning in the classroom and laboratory environment for health sciences students. As detailed above, the HHP Department utilizes several different types of equipment in preparing students for entry-level positions in the field, including blood pressure cuffs, electrocardiography, heart rate monitors, lactate analyzers, hand grip dynamometers, etc. While the availability of the Kinesiology Lab has contributed greatly to student understanding of these equipment tools, the limited size of the room hold logistical challenges for scheduling student use. It is clear however, that students are benefiting from the equipment available and faculty will continue to identify new technological equipment that is used in the field to add to the existing tools available.

In order to keep abreast of the most up-to-date equipment and use of technology in the field, the ACSM *Guidelines for Exercise Testing and Prescription (9th edition)* will be a key aspect of aligning the program with the skills required of professionals in the field. This book is considered the key publication of the KSA's for the HFS and PT certifications, of which our students are most likely to acquire. The Chair, in conjunction with faculty, will audit this publication to verify the KSA's identified in the book are addressed throughout the HPR program.