Mission

UMBC’s Learning Resources Center provides dynamic undergraduate academic support programs as the catalyst for students to achieve their academic goals and become independent, lifelong learners responsible for their success.

Student testimonial: “In the past, I often ran into issues in math because I didn't understand why I had to do something, why a concept worked the way it did. [My tutor’s] explanations really helped me to improve and boosted my confidence about applying concepts.”
The goal of the department is to provide superior undergraduate academic support programs, as opportunities for students to achieve their academic goals and become independent learners responsible for their education at UMBC. Students using academic support programs and services become successful students in class and in research activities.

Students are introduced to our services before attending the first class as we are responsible for Placement Testing in Mathematics, Writing, and Reading. Placement tests are accessed online once a student has been admitted into UMBC. Appropriate course placement is crucial for future academic success.

UMBC students have the opportunity to use walk-in tutoring at the Math Lab and The Writing Center on the first floor of the UMBC Library, behind the reference desk.

Midway through the semester, some first year and/or transfer students may receive a First-Year Intervention Alert from myUMBC if they drop below a “C” in a class. Successful students read and respond to their Alerts and access the appropriate campus resources.

By attending peer-led group discussion sessions, students learn problem-solving skills from the Supplemental Instruction/Peer-Assisted Study Session (SI/PASS) leader and each other. The LRC also provides the tools for our undergraduate educational and support staff to have the opportunity to reach their goals.

The LRC’s services are free of charge and open to all enrolled students. We encourage all students to take advantage of our services so that they can succeed at UMBC and beyond.

### Learning Resources Center Programs

<table>
<thead>
<tr>
<th>Placement Testing</th>
<th>Developmental Courses</th>
<th>First Year Intervention Alerts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Success Meetings</td>
<td>SI/PASS</td>
<td>Math Lab</td>
</tr>
<tr>
<td>Appointment Tutoring</td>
<td>Writing Center</td>
<td>International Teaching Assistants Program</td>
</tr>
</tbody>
</table>
The LRC’s Math Lab data was utilized for a pilot predictive analytics study of impact of interventions on student success.

The LRC partnered with the College of Natural and Mathematical Sciences to deploy a new math placement test utilizing the ALEKS Placement, Preparation and Learning Assessment to determine readiness for mathematics courses. ALEKS PPL is a web-based program that uses artificial intelligence to map a student’s strengths and weaknesses, and gives students opportunities to practice skills and retest.

Elaine MacDougall, English department Lecturer, was appointed the new Assistant Director of LRC’s Writing Center.

Level III Writing Center tutor Michael Raup presented his research during panel discussions at the Naylor Research Workshop at York College and at the Mid-Atlantic Writing Centers Association Conference.

LRC staff Cassie Bichy, Victoria Skinner, Deborah Webb and SI/PASS Leaders Hannah Carter, Carly Sciandra and Eudorah Vital presented on LRC program innovations at the Maryland College Learning Center Association conference this March.
Math Lab

Civitas Pilot: Propensity Score Matching Research on Impacts of the Math Lab

- Students enrolled in Math 106, 150, 155 who use the Math Lab have a higher probability of passing the course.
- Students with a GPA below 2.5 enrolled in Math 151, 152 who use the Math Lab have a higher probability of passing the course.
- Students repeating a 100-level Math course who use the Math Lab have a higher probability of passing the course.
- Transfer students use the Math Lab at twice the rate of students who matriculate as freshmen and transfer students derive greater benefits from using the Math Lab.
What students say about their Writing Center tutors:

- Helped me better organize my essay to address the assignment.
- Helped me develop a strong outline and further develop my argument.
- Helped me with ideas on starting the thesis, gathering more sources and creating a good buildup to my thesis.
- Walked me through reading the paper out loud to catch my own mistakes.
- Helped me become more concise and develop a clear message, using better grammar.
- Discussed citations for scientific lab report and how to properly organize a report.

What new skills tutors see students apply:

- Understood how to create transitions and connect the ideas between summaries and analysis.
- Understood why certain sentence structures in his work needed rephrasing.
- Strengthened and validated his stance within an argumentative paper.
- Revised sentence organization in order to improve coherency and flow.
- Confidently identified and corrected her errors.
- Used proper in-text citation and citing after a paraphrase.
Growth in Tutoring

From the beginning when tutoring occurred in hallways and the basement of the Library, to our current Math Lab and Writing Center on the first floor of the Library and Appointment Tutoring rooms in Sherman Hall, student use of LRC services continues to grow.

“If you build it, they will come!”
Weekly Appointment Tutoring

Student Testimonial:

My physics course instructor was very conceptual, and my LRC tutor helped me turn the concepts into practice problems and gave me real world examples of the concepts from the class. When I am learning about a concept, my tutor explains what the formulas are and what problem types I could apply those formulas to.

I bring in my homework that I have already started and ask my tutor questions about problems I did not understand. I also bring in exam questions I got wrong and we figure out how to do them correctly.

In my tutoring session there are 2 or 3 other students, which is helpful because now I know that there are others who are confused, too. We work on problems we missed on quizzes together to figure them out, and compare answers to questions we missed.

Physics is going so much better now. The first time I took the course, I was not confident in my ability, but knowing that I could go to the LRC where someone could make it simple and where I could go for help when I got stuck gave me more confidence. I would ask questions in person at the LRC that I did not feel comfortable asking in class.

At first I felt a stigma against asking for help, but now I believe it doesn’t matter what other people think about you; getting the knowledge is the most important thing. I am able to help other people now who ask me questions, so I am feeling pretty good about myself! I’m reviewing in my tutoring session what I am hearing in class and practicing on the homework. I am spending more time now on practice problems, and tutoring has helped me see that I cannot get physics unless I practice. The instructor said that but I believed it when I heard it from my peer tutor who had done well in the class.

My tutor is someone else I am accountable to, and I want to show him that I am learning, so I am trying harder, and coming to my tutoring sessions prepared, knowing what I need to ask for help on.

Being smart is not about getting something right away. In my freshman year I lost my confidence because UMBC was so much harder than high school. I had to change my mindset to realize that I was smart, and I needed to work hard to be able to learn hard concepts in chemistry, physics and math.

Tutoring shows you the value of learning something for yourself and the power of being able to teach others. I wouldn’t mind being a tutor now!

For more in-depth support, students can apply for a weekly tutoring appointment for the entire semester. We are successful in scheduling about 95% of the people who enroll for tutoring within 3 days. Appointment tutoring is available for any 100 or 200 level course offered at UMBC.

Total Appointments AY 16-17:
2763 sign-ins for 490 unique users

Most often requested courses for tutoring:
Physics: 492 sign-ins for 101 users over 4 classes
Spanish: 439 sign-ins for 121 users over 8 classes
Supplemental Instruction SI/PASS

Supplemental Instruction (SI) is an academic support model that utilizes peer assisted study sessions (PASS). The SI/PASS program targets traditionally difficult academic courses (D/F/W rate over 25%) and provides regularly scheduled, out-of-class review sessions. The sessions are informal seminars in which students compare notes, discuss readings and develop organizational tools and predict test items.

Many students who attend one session return for other sessions during the semester. Studies show that many students who regularly attend PASS improve their grades.

SI/PASS in 2016-2017:
- Leaders mean cumulative GPA: 3.73
- 1,749 sessions offered
- 19,278 student visits to sessions
- Mean GPA for SI/PASS attendees: 2.56
- Mean GPA for non-attendees: 2.37

SI/PASS-Supported Courses

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BIOL 141</td>
<td>CHEM 101</td>
<td>PHYS 111</td>
</tr>
<tr>
<td>BIOL 142</td>
<td>CHEM 102</td>
<td>PHYS 112</td>
</tr>
<tr>
<td>BIOL 302</td>
<td>CHEM 123/124</td>
<td>PHYS 121</td>
</tr>
<tr>
<td>BIOL 303</td>
<td>CHEM 351</td>
<td>PHYS 122</td>
</tr>
<tr>
<td>GES 120</td>
<td>MATH 150</td>
<td>MATH 155</td>
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Q&A with Carly Sciandra

Tell us about how you are involved on campus.
I am a junior Biology major with Chemistry and History minors. I am an undergraduate researcher in Dr. Michael Summers HIV Structural Biology Lab, an athlete tutor and Organic Chemistry Lecture Assistant. I hope to obtain my MD/Ph.D in the future and spend the rest of my life helping others.

How and why did you get involved in SI/PASS?
I LOVED going to SI/PASS sessions when I took Biology 141. The confidence the leader instilled in me made me determined to become a leader to do the same for incoming students.

What is your favorite thing about being an SI/PASS Leader?
I love watching students interact in groups to learn material that once confused them. The pride they get when they finally grasp material is so rewarding.

Why should students attend SI/PASS sessions?
Even if they are completely confident in the class or struggling to understand something, coming to these sessions gives students the ability to work with peers to see their perspective on the material. They can gain more confidence through teaching others or understanding material through group work.

Tell us about how you are involved on campus.
How and why did you get involved in SI/PASS?
What is your favorite thing about being an SI/PASS Leader?
Why should students attend SI/PASS sessions?
Supplemental Instruction SI/PASS

SI/PASS Attendees have lower D/F/W rates than Non-Attendees (Fall 2016)

<table>
<thead>
<tr>
<th>Course</th>
<th>SI/PASS Attendees</th>
<th>Non-Attendees</th>
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</thead>
<tbody>
<tr>
<td>MATH 150</td>
<td>24%</td>
<td>39%</td>
</tr>
<tr>
<td>MATH 155</td>
<td>24%</td>
<td>44%</td>
</tr>
<tr>
<td>BIOL 302</td>
<td>12%</td>
<td>25%</td>
</tr>
<tr>
<td>CHEM 102</td>
<td>28%</td>
<td>42%</td>
</tr>
<tr>
<td>CHEM 351</td>
<td>18%</td>
<td>35%</td>
</tr>
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SI/PASS Growth in Student Participation

- Distinct Students: 40% participation rate on average
- Contact Hours: 19278

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Distinct Students</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AY 12-13</td>
<td>1140</td>
<td></td>
</tr>
<tr>
<td>AY 13-14</td>
<td>1101</td>
<td></td>
</tr>
<tr>
<td>AY 14-15</td>
<td>1510</td>
<td>7807</td>
</tr>
<tr>
<td>AY 15-16</td>
<td>2396</td>
<td>12961</td>
</tr>
<tr>
<td>AY 16-17</td>
<td>3502</td>
<td>19278</td>
</tr>
</tbody>
</table>

SI/PASS Growth in Courses Supported

- AY 11-12: 4
- AY 12-13: 7
- AY 13-14: 7
- AY 14-15: 11
- AY 15-16: 13
- AY 16-17: 18
First Year Intervention Alerts

The First Year Intervention program is an early alert program at UMBC designed to assist students in their first year who are in jeopardy of failing a course.

During the second month of each semester, faculty send alerts to students who are in jeopardy of receiving a D or F in the course. Students receive the alert via MyUMBC, including a link to the Academic Resource Center website, with resources to help them make the necessary changes to improve their grade and become successful in their academic careers. Faculty can also send alerts to non-first year students.

Outcomes of FYI Alerts in 2016-2017

- 89% (124/139) of students surveyed were able to name a specific strategy they employed to increase their academic standing upon receiving an FYI alert.

- After analyzing First Year Intervention Alerts and noting the growth in need for help in Spanish, the LRC piloted a Spanish Lab, offering walk-in help with for 101, 102, 103, 201 Spanish courses.

- The Learning Resources Center offered Academic Success Meetings as an intervention for commuting transfer students receiving 2 or more FYI alerts. 19 one-on-one meetings were attended by students, focusing on test anxiety, motivation, time management and connecting students to on-campus resources.
The Learning Resources Center, in conjunction with the Office of Undergraduate Admissions and Orientation, the Office of Academic and Pre-Professional Advising, the English Department and the Department of Mathematics and Statistics, coordinates required Placement Testing for all new UMBC students. Students may be exempt from a placement test based on previous college credit.

UMBC has three different Placement Tests: English, Reading, and Math.

The **English Placement Test** determines a student’s placement in English Composition courses. Students may place into: English 100, the main composition course at UMBC; English 110, a version of English 100 for students who may have an English as a second language background; or ELC 041/042, offered through the English Language Institute for students who would benefit from English as a Second Language Instruction.

The **Reading Placement Test** determines if a student may benefit from LRC 100 or LRC 105. LRC 100 Introduction to College Reading helps students improve the reading and critical thinking skills necessary for college-level work. LRC 105 helps students build effective strategies for self-management and study skills.

The **Math Placement Assessment** determines the most appropriate courses for each student as they move forward with the Math Pathway for their major.

The LRC has worked in conjunction with the Math Department and the College of Natural and Mathematical Sciences to adopt the new online ALEKS Placement, Preparation and Learning (ALEKS PPL) Assessment. ALEKS PPL is a web-based program that uses artificial intelligence to map a student’s strengths and weaknesses. In addition to the test adapting to a student’s demonstrated skill level, ALEKS also employs tutorial modules for any student who is unsatisfied with their score and would like to retest. With the new testing upgrade, Math Placement Test scores are now uploaded into PeopleSoft within 48 hours of a student testing.
# Learning Resources Center Courses

## LRC 101a and 105: Academic Success for Lifelong Learning
LRC 101a and 105 share the same curriculum, but students taking these courses have different goals. LRC 105 helps freshmen and transfer students make a successful transition to college. LRC 101a is designed as an intervention for students at any stage of academic probation or suspension.

Instructors work closely with advisors and financial aid counselors to support each student’s success, while connecting students to campus resources. Students learn a variety of self-management and study techniques that can be applied to current and future courses, including: classroom communication, time management, note-taking, textbook reading, test preparation, and test-taking strategies.

**Students who succeed at LRC 101a persist at similar levels to students not on academic probation, which is valuable given the at-risk group of students this intervention helps.**

**Students on LRC 101a:**
“*The course was immensely helpful in getting back on track.***”
“*The course helped make me a better student.*”
“It gave me the opportunity to improve as a student and as a person, to build my confidence.***”
“We learned important habits that everyone should be using to be more successful.”

## LRC 099: Introductory Algebra
LRC 099 is designed for students with little or no algebra knowledge, but who need to take algebra (Math 106) and the calculus-sequence for their majors. Students are placed into LRC 099 based on their Math Placement Assessment.

67% of students in Fall 2016 who passed LRC 099 went on to pass Math 106 in Spring 2017.

## LRC 100: Introduction to College Reading
LRC 100 is designed to help students acquire or improve college-level reading and critical thinking skills. Students are recommended to enroll in LRC 100 based on their Reading Placement Assessment. Students learn reading strategies that shape their reading processes, monitor their understanding of a college-level texts, and improve their reading comprehension in other academic disciplines.

## LRC 115: Advanced Diction and the International Teaching Assistants Program
LRC 115 supports graduate teaching assistants for whom English is a second language, focusing on techniques for effective oral communication and teaching in the UMBC classroom. The International Teaching Assistants Program (ITAP) is an orientation and instructional program for prospective International Teaching Assistants, who are evaluated by the LRC in conjunction with academic departments. Some ITAs are recommended to take LRC 115.

In AY 16-17, 100% of the ITA’s in LRC 115 improved their teaching and English skills in preparation for teaching at UMBC.
The Learning Resources Center staff trains almost 200 tutors each year to provide academic support to help UMBC students achieve their goals.

The LRC’s tutor training program is certified by the College Reading and Learning Association’s International Tutor Training Program Certification (ITTPC). Tutors can earn level 1, level 2 and level 3 certification.

Tutors can complete their training online or through in person coursework (Education 313/314 or English 321/323 for Writing Center Tutors).

I am from Baltimore City and a senior studying Biochemistry & Molecular Biology and Spanish. Besides my studies, I spend the bulk of my time tutoring, doing research, and playing music.

**Tell us about how you are involved on campus.**
I enjoy helping people in whatever way possible. I am an undergraduate teaching assistant for BIOL 141 and a member of both the Meyerhoff Scholars Program and the Honors College. Both programs also promote giving back to the community. During certain parts of the semester, I will work with other scholars get involved with a community service event. My favorite community service activity that I look forward to every year is working with my fellow scholars as a judge for an area Science Fair for high school students. I love seeing students excited about science and trying to keep that passion alive.

**How and why did you get involved in being a tutor?**
I started tutoring for the LRC because I loved math and I wanted to help more students do well in these classes like mathematics. After speaking with my MATH 151 professor, she suggested that I should apply to be a Math Lab tutor.

**What is your favorite thing about being a tutor?**
My favorite thing about tutoring is the amount that I learn as a tutor. Some professors teach concepts differently or choose to cover new topics. Students tend to ask interesting and sometimes complex questions I never would have thought about. The exposure to these variations of classes and thoughts about the material makes me a better tutor and greatly increases my knowledge about the subject material. I think it is cool that you can teach and learn at the same time!

**What advice do you give to students about tutoring?**
Everyone needs help at some point in their educational career. I always tell students that people who seek tutoring are smart. People who need help and do not seek help aren’t as bright as they think they are. I believe students should come prepared to work and be involved with their education. Don’t expect the tutor to lecture at them. They should expect the tutor to work WITH them through the material. The goal as a tutor is help the student realize that they can be self-sufficient learners.
Learning Resources Center Future Goals:

The Learning Resources Center has achieved great success, with record numbers of students taking advantage of tutoring and supplemental instruction support. As UMBC grows, the Learning Resources Center must also grow to continue to offer resources supporting student success.

The Learning Resources Center is working in collaboration with campus leadership to create an Academic Success Center that will centralize learning support in one highly visible and accessible space at UMBC. UMBC’s Academic Success Center expands the LRC’s ability to work with departments to increase the number of students who take advantage of academic support, and thereby increase student persistence, graduation, and the timely completion of students’ educational plans.