A Whole New ARC
by Ryan Baldwin

Coming in the next few weeks will be the addition of a brand new Academic Resource Center! This new space will allow for more students to come to tutoring sessions and get the academic support they need.

Additionally, the Freeman Hall ARC will offer a second venue to host programs from the Resident Tutors as well as another study space for students who wish to come alone or in groups! We are excited to welcome the student population to utilize our resources and look forward to supporting students learn smarter.

Keep a look out for updates on programs, events coming to residence halls near you! More to come on exactly when the new ARC will open.

**Programs and Events by RTs!!**

**Hallo-Oke** - 10/29 @6pm Gibson 3rd Fl. Lounge – Halloween Karaoke and fun!

**Stress Free Zone!** – 11/9 @8pm Blanton 1st Fl Atrium Lounge – Relax, have fun, play games, free pizza and study tips!

**Finals Study Break** – 12/13 @3pm Dinallo ARC (Room 2151) – Take a break from studying and play some games, do puzzles and eat some food!
Did You Know?! By Karla Sanchez

1. The normal energy used by our brain is 0.1 calories per minute. It could go up to 1.5 cal/min during activities such as puzzle solving.

2. Genetically altered bacteria could be used to create an environment on Mars that is similar to Earth's environment.

3. Researchers have developed an anti-aging drug that has increased the lifespan of the nematode worm by 50%. They hope to use it to develop drugs that can fight diseases such as Alzheimer's and Parkinson's.

4. Turtles and sea cucumbers can breathe through their butts.

5. Scientists have discovered the fossil remains of a dinosaur heart. X-rays suggest that the heart had four chambers and that the dinosaur was warm blooded.

6. If all your blood vessels were laid end to end, they would circle the entire globe twice.

7. An inter-species birth of a rare wildcat was accomplished by transferring a frozen embryo of an African wildcat to a house cat.

8. DNA from a single human cell is 121 feet when unraveled.

9. Researchers have found that cocoa beans (used to make chocolate) contain antibacterial agents that help fight tooth decay.

10. Humans share 60% of DNA with a banana.

What’s the Big Deal About Organic Chemistry? By Luis Lopez Gomez

Organic Chemistry is in a sense the Chemistry of life. The Organic Chemistry courses are some of the most entertaining and amusing courses you will take if you happen to be a Chemistry, Biochemistry or Biology major. Organic Chemistry has almost no calculations and the focus of this type of Chemistry is learning how to draw, name, and identify simple organic chemicals as well as understanding how chemical reactions actually happen.

If you have ever taken a General Chemistry course, you would think of a Chemical Reaction as just arrows connecting the Reactants and the Products. In Organic Chemistry, one will learn how those reactions happen at the atomic level as well as the mechanisms through which they take place. In the present, Organic Chemistry is the main reason why advanced medicines and cures exist. The Science itself deals with the creation of Organic Chemicals and the courses will teach you several skills needed in order to perform Organic Synthesis. Research is constantly being performed by Organic Chemists all over the United States, the World and even here at Montclair State University. The purpose of Organic Research is design molecules, create them from simpler organic molecules and analyze them through several advance techniques such as Mass Spectroscopy and Magnetic Nuclear Resonance commonly known as MS and MNR respectively. This research leads to the discovery of Lead Drugs that if successful in clinical trials, will become a new cure for a specific disease.
What’s So Great About Math? By Dan Talasnik

Think Mathematics is a boring, monotonous, cruel subject that is taught by professors whose sole intentions are to demoralize you with confusing equations and convoluted logic? Well, it may be, but it's useful to keep in mind how important it really is to the world in which we currently live. Basically, not all Math is bad for you, contrary to popular belief! In fact, many aspects of the subject have been utilized to create our technologically advanced world. Whether you like it or not, you use Math every day, AND you use it way more than you think. To demonstrate, take a look at the names of these ten equations, see how they're used in our world,(Google them if you want to see what they look like) and you'll see how many of them you can actually apply to your own life:

   Importance: Helped create trillion-dollar derivates market, but incorrect use contributed to current financial crisis.
2. The Pythagorean Theorem -- Function: Working out the lengths of the various sides of a triangle.
   Importance: Foundation of modern trigonometry - used in surveying, mapping, and navigation.
3. The Fourier Transform -- Function: Describes patterns in time as a function of frequency.
   Importance: Used in JPEG compression, signal analysis, and discovering the structure of molecules.
   Importance: Measurements of solids, curves, and areas - used in medicine, economics, and computer science.
5. Euler's Formula for Polyhedra -- Function: Calculating the space of shapes.
   Importance: Led to the development of topography - used in 3D mapping and by biologists to understand DNA.
   Importance: Critical to astronomy - helped discover Pluto, used in space exploration, and putting satellites in orbit.
7. Maxwell's Equations -- Function: Explain relationships between electric and magnetic fields.
   Importance: Prediction and understanding of electromagnetic waves - used in RADAR, TV, and modern communications.
   Importance: Proved perpetual motion is impossible and helped prove matter is made from atoms.
   Importance: Revolutionized small-scale physics; crucial in developing modern computers via semiconductors transistors.
10. Theory of Special Relativity -- Function: Shows mass & energy are interchangeable; explains behavior of objects at high speeds.
    Importance: Introduce the idea of time dilation and helped lead to nuclear weapons.

Effective Note Taking Methods by Amna Adam

One method of note taking that have effectively helped students since high school and continues to be of much help in college classes as well is the Cornell Note Taking System. The setup process is quite simple. Prior to class, fold one-fifth of the page in two vertically with the ratio of about 1:2. Label the left Cues, which you will leave empty during lecture; on the right hand side record your class notes. Immediately after class if possible, reduce your notes to concise and clear clues for later reviews, recitation, reflection, etc. The bottom section is designated for summary of each page to few sentences, preferably three sentences maximum. This system is known to provide the perfect format for following through with the 5R’s of note-taking, which are:

Record:- an opportunity to record meaningful lecture notes/facts on the right side of page.
Reduce:-- summarize class notes into concise key points on the left hand side. This techniques is known to clarify meanings and relationships, reinforce continuity, and strengths memory.
Recite:- Well it exactly how it sounds, all you do is cover the note taking area and recall the facts using the cue column. Try not to recite it mechanically, rather rephrase the notes.
Reflect:- Draw out your own conclusions from the notes and make connections with your other course. The more connections you can make between courses and how they relate, the stronger your memory of the subject will become.
Review:- Spend at least ten minutes each week reviewing your notes in order to retain information you’ve learned.

For the complete details of this system and a sample of how to setup the page refer to How to Study in College 7/e by Walter Pauk - 2001 Houghton Mifflin Company or stop by the ARC for a copy.
**Why Learn a Second Language?** By Valentin Torres

Is it important to know a second language? Every individual has their own believe, and some people might believe that it is important to know a second language, while others might disagree. I personally believe that it is very important to know a second language. As college students we are often interacting with people from different countries, who have different cultures and speak a different language. Knowing a second language will help students connect with international students in a social way. It will also help them understand their culture and build a stronger connection with them. Comprehending a second language will also help students in a professional manner. It will give students an advantage, especially when it comes to competing for a work position. Moreover, it also helps them gain the trust of international business people, who can help them open many doors to international jobs. Thus, learning a second language has many benefits that can change you as a person and help you succeed in life.

**Chemistry Word Search!** By Kaba Tandjigora

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**Words to Find:**
- Enantiomer, Molecule
- Isomer, Buffer
- Nitrogen, Bases
- Acidic, Atoms
- Carbon, Orbital

**Where is the ARC located?!?**

Dinallo Heights, Room 2151

& Soon in Freeman Hall

**When is the ARC open?!?**

Sun-Thurs 4pm-10pm

**Who can stop in?!?**

ANY MSU Student!

**Suggestions? Comments?**

*Need something we haven’t yet provided?*

Send a message to BaldwinR2@mail.montclair.edu

**What Subjects are currently covered?**

- Biology I & II,
- Chemistry I & II, Organic Chemistry I & II,
- Cell/Molecular Biology,
- Algebra I & II, Pre Calculus,
- Calculus I & II, Linear Algebra,
- Basic Math,
- Spanish I-IV, Arabic, and more to come!