

The background of the entire page is a repeating pattern of light gray hexagons, resembling a honeycomb or molecular lattice structure. A central purple rectangle with a black border contains the text.

SUMMER 2006
JAMES MADISON UNIVERSITY
MATERIALS SCIENCE

RESEARCH EXPERIENCE FOR
UNDERGRADUATES (REU)

Welcome

Welcome to the Summer 2006 JMU Materials Science Research Experience for Undergraduates. We hope your time here at JMU is fun, educational, and productive.

What is the REU?

The Research Experience for Undergraduates Program is a program in which funds are given to a small number of colleges and universities throughout the United States to enable undergraduate students to participate in high level scientific research. These programs provide an immersion in research for ten weeks during the summer, direct mentoring of undergraduate students by faculty, and social and other events to encourage the development of a scholarly community engaged in scientific pursuits.

The bulk of the funding for this program comes from the Department of Defense through a program called ASSURE (Awards to Stimulate and Support Undergraduate Research Experiences and from some funds provided by James Madison University. Some of the student scholarships are being funded by other funds from grants that individual faculty members have received.

Summer 2006 Participants

| | <u>Institution</u> | <u>Advisor</u> |
|--------------------|--------------------------------|----------------|
| Dan Amon | JMU | Utter |
| Casey Boutwell | JMU | Paulson |
| Juliana Brown | Mary Washington | Reisner |
| Anna Cannon | Ollscoil na hÉireann, Gaillimh | Utter |
| Alex Cimino-Hurt | JMU | Paulson |
| Steven Ferree | High Point | Mohler |
| Ashley Figueiredo | Sweet Briar | Augustine |
| Scott Fix | JMU | Paulson |
| Jacob Forstater | JMU | Hughes |
| Adam Gendell | JMU | Amenta |
| Jeremy Harris | JMU | Reisner |
| Will Harris | High Point | DeVore |
| Erin Hinson | Western Carolina | Layman |
| Eric Hoppman | JMU | Utter |
| Tiffany Jenkins | JMU | Lawrence |
| Kyle Moler | JMU | Mohler |
| Patrick Olin | JMU | Lawrence |
| Julia Swavola | JMU | Hughes |
| Patrick Turner | JMU | Augustine |
| Jon Wyrick | JMU | Augustine |
| Kathryn Zimmermann | JMU | Augustine |

What is required of You

You are taking a one credit course on research in materials science this summer and the primary requirement of that course is that you take a serious approach to solving the research problem to which you are assigned and that you use that experience to develop as a scientist. It is typical to work as much as 40 hours a week for the next 10 weeks, though the exact hours that you work are to be

determined by you and your mentor in the way that best suits your research. Your attendance will also be expected at several seminars, several field trips, and group meetings. Finally, you are expected to keep a detailed notebook of your work and give a presentation of your completed work during the week ending August 4.

Your Scholarship

You will be enrolled this summer in a one credit research course here at JMU. For those of you who are not already JMU students, this means that you will be enrolled here as a special summer student and be able to receive an ID, email account, library privileges, and access to JMU facilities such as UREC. Your scholarship check is currently being processed by the JMU Financial Aid Office.

Since this is being paid as a scholarship, there will be no tax withheld from this check. We strongly recommend that you determine for yourself if this is taxable income for your particular situation and pay the tax required of you next spring.

Housing

Many of you are receiving housing from the REU program on Greek Row. If you have any problems related to this housing, please contact the JMU Events and Conferences Office.

Mail Service

If you would like to receive mail while here at JMU, you may have it sent to the physics department office:

*c/o Dept. of Physics MSC 4502
James Madison University
Harrisonburg, VA 22807*

Group Meetings

It is expected that your advisor will have some type of group meeting on a weekly basis, though he or she may choose some other way of communicating with you.

Social Events

There will be social events that allow students from the different labs to get to know each other better. These are tentatively planned to include a pool party/cookout and a canoe trip.

Field Trips

We hope to take two field trips this summer. In years past, these included NIST in Gaithersburg, MD, Dominion Semiconductor in Manassas and Johnson & Johnson's Spectacle Lens Group in Roanoke. You will be informed as soon as the trips are scheduled.

Seminars

There will be several seminars this summer involving visitors from other institutions. The dates and times for these will be listed on the web.

Future Publications

We hope that after the summer ends you all keep in touch with us and let us know how your career progresses. One thing that we do request is that you acknowledge the support of the Department of Defense ASSURE program (grant #0353773) and inform us of any publications or presentation that arise from your work this summer. In addition, please check with your advisor about other grants that you may need to acknowledge.

What To Do In And Around Harrisonburg

There are things to do in Harrisonburg in the summer. While this is not a comprehensive list and should not be considered an endorsement of any sort, here are some of the more popular regularly scheduled activities:

Fridays on the Square(<http://www.fridaysonthesquare.com>)

An event each Friday of the summer on Court Square in downtown H'burg alternating between bands and movies. Bands perform on the lawn of the courthouse every other Friday evening from 7 to 9 pm. On the other weeks, movies will be shown starting around 8:30 pm on the square (pre-show events start at 8 pm). All events free and open to the public.

June 2 Film: *Safety Last*
June 9 Concert: Quatra Non Bossa (world music)
June 16 Film: *My Big Fat Greek Wedding*
June 23 Concert: Jackass Flats (bluegrass)
June 30 Film: *An American Tail*
July 7 Concert: Just Jazzin' (jazz)
July 14 Film: *The Big Sleep*
July 21 Concert: Nonesuch (Appalachian music)
July 28 Film: *Finding Nemo*
August 4 Concert: Tom Principato (blues)
Aug. 9 Film: *Charade*
Aug. 20 Concert: King Bees (swing)
Aug. 25 Film: *Willie Wonka and the Chocolate Factory*
Sep. 1 Concert: Shane Hines (rock)
Sep. 8 Film: *Napoleon Dynamite*

Fundfest

Bands perform on the lot across from the *Daily News Record* offices on South Liberty Street every other Wednesday evening from 6 to 9 pm. Admission is charged to assist a local charity.

May 31 Groove Town
(Harrisonburg-Rockingham SPCA & ARC of Harrisonburg-Rockingham)
June 14 Burning Bridges
(Harrisonburg-Rockingham SPCA & Broadway Rescue Squad)
June 28 Billy Scott
(Harrisonburg-Rockingham SPCA & Shenandoah Mtn. Bike Club)
July 12 The Janitors
(Harrisonburg-Rockingham SPCA & Brittany's Helping Hand)
July 26 Fat Ammons
(Harrisonburg-Rockingham SPCA & H'burg Downtown Renaissance)
Aug. 9 Rubber Band
(Harrisonburg-Rockingham SPCA & Hand-in-Hand Mothers Program)
Aug. 9 The Rhondels
(Harrisonburg-Rockingham SPCA & Camp Still Meadows)

Kline's Dairy Bar

A must part of any summer in the valley. One of a kind ice cream Only three flavors at a time: vanilla, chocolate, and the flavor of the week.

June 1 Oreo
June 8 Banana
June 15 Raspberry

June 22 Peach
June 29 Chocolate Peanut Butter
July 6 Orange Creme

Shenandoah Valley Bach Festival (<http://www.emu.edu/bach>)

June 11-18, hosted by Eastern Mennonite University. Various concerts of Bach pieces at EMU and chamber music each day at lunchtime at Asbury UMC Church in downtown H'burg.

Shenandoah Shakespeare Express

Performances at the Blackfriars Playhouse in Staunton. This summer's series includes *Much Ado About Nothing*, *Return to the Forbidden Planet*, *Richard III*, *As You Like It*, *The Tempest*, and *Macbeth*. Performances are in a recreation of Shakespeare's own indoor playhouse, The Blackfriars.

Concerts on the Quad

The Harrisonburg-Rockingham Original Concert Band will perform on the lawn in front of Duke Hall at 7 pm. Picnic baskets, lawn chairs, and blankets are welcome.

June 4 JMU Jazz Ensemble
June 11 Just Jazzin'
June 18 Harrisonburg-Rockingham Concert Band
June 25 Harrisonburg-Rockingham Concert Band

Green Valley Book Fair (<http://www.gvbookfair.com>)

Cheap, cheap books. Open only a few times a year – this summer from July 1 to July 16.

Harrisonburg Turks (<http://www.harrisonburgturks.com/>)

The Harrisonburg Turks are one of eight teams in the Shenandoah Valley League, a summer college developmental league sanctioned by the NCAA. The Turks play in Memorial Stadium next to Harrisonburg High School on South High Street. Games start at 7:30 pm and are free for anyone with a JMU ID.

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|-------------------|------------|-------------------|-------------|
| Saturday, June 3 | Covington | Weds., June 28 | Luray |
| Tuesday, June 6 | Waynesboro | Thursday, June 29 | Covington |
| Friday, June 9 | Woodstock | Friday, June 30 | Staunton |
| Tuesday, June 13 | Staunton | Sunday, July 2 | New Market |
| Weds., June 14 | Winchester | Saturday, July 8 | Waynesboro |
| Thursday, June 15 | Covington | Weds., July 12 | Covington |
| Sunday, June 18 | Waynesboro | Friday, July 14 | Staunton |
| Tuesday, June 20 | Haymarket | Saturday, July 15 | Woodstock |
| Thursday, June 22 | Staunton | Friday, July 21 | Front Royal |
| Sunday, June 25 | Woodstock | Saturday, July 22 | Waynesboro |
| | | Sunday, July 23 | Woodstock |

Other Events

Check http://www.downtownharrisonburg.org/harrisonburg_events.php for other things to do in downtown Harrisonburg this summer.