



SUMMER 2009
JAMES MADISON UNIVERSITY
MATERIALS SCIENCE

RESEARCH EXPERIENCE FOR
UNDERGRADUATES (REU)

Welcome

Welcome to the Summer 2009 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 2009 Participants

	<u>Institution</u>	<u>Advisor</u>
Annie Bailey	Virginia	Pierrakos
Doyle Baker	Norfolk State	Utter
Michelle Beatty	JMU	Pierrakos
Yanita Boayue	Stevenson University	Caran
Matt Bradley	JMU	Hughes
Tim Brooks	JMU	Courtier
Kevin Cabaniss	JMU	MAIC collaboration
Chris Flint	JMU	Paulson
Douglas Fordham	JMU	Amenta
Smai Fullerton	American	Paulson
Laura Lee	High Point	Hughes
Ibraheem Rasoul	JMU	Utter
Brandy Schell	Bridgewater	DeVore
Hannah Shepherd	JMU	Johnson
Nora Swisher	JMU	Utter
Lidia Varga-Claros	Mary Washington	Mohler
Jon Willcox	JMU	Hughes

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 July 31.

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 :

*c/o Center for Materials Science MSC 4310
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 #0851367) 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

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. (<http://www.fridaysonthesquare.com>)

June 5 Concert: Charlottesville Drum Choir
June 12 Film: *Dirty Rotten Scoundrels*
June 19 Concert: Jan Smith and the Honeybirds
June 26 Silent Film: *Grandma's Boy*
July 10 Film: *Casablanca*
July 17 Concert: Chris Knight
July 24 Film: *Second Hand Lions*
July 31 Concert: *Midnight Spaghetti & the Chocolate G-Strings*
Aug. 7 Film: *Runaway Bride*
Aug. 14 Concert: *Tom Principato*
Aug. 21 Film: *The Incredibles*
Aug. 28 Concert: *Emily Brass Band*
Sep. 4 Film: *Nacho Libre*

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 the Harrisonburg-Rockingham SPCA & a local charity.

May 27 JAH Works (Healthy Families of the Blue Ridge)
June 10 Hacken's Boy's (Knights of Columbus)
June 24 The Worx (Community Ministry Food Pantry)
July 8 Standing Room Only (Harrisonburg-Rockingham Child Daycare Center)
July 22 Mirage (H'burg Downtown Renaissance)
Aug. 5 Southpaw (March of Dimes)
Aug. 19 Hacken's Boy's (Shenandoah Valley Autism Partnership)

Green Valley Book Fair

Cheap, cheap books. Open only a few times a year – this summer from June 27 to July 12 (<http://www.gvbookfair.com>).

Independence Day Celebrations

Summer Jam 2009 – Massanutten Resort, Thurs. July 2. Gates open 5:00, fireworks around 10:30. Admission charged. (<http://www.rhspca.org/events.html>)
Valley 4th – Court Square, Downtown Harrisonburg, Sat. July 4. Events all day with fireworks after sunset. (<http://www.downtownharrisonburg.org/v.php?pg=32>)
Staunton 4th of July – Gypsy Hill Park, Staunton, Sat. July 4 (<http://stauntonjulyfourth.com/>)
4th of July in New Market – New Market, Sat. July 4. Includes Firecracker Five-Miler, events, and fireworks after dark. (<http://www.newmarketvirginia.com>)

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.
(<http://www.klinesdairybar.com/>)

Wolfe Street

May 28 – Banana

June 4 - Blueberry

June 11 – Cookies and Cream

June 18 – Black Raspberry

June 25 – Peach

July 2 – Choc. Peanut Butter

July 9 – Choc. Chip Cookie Dough

July 16 – Black Raspberry

South Main St.

May 28 – Cherry Nut

June 4 – Red Raspberry

June 11 – Cake Batter

June 18 – Choc. Peanut Butter

June 25 – Cherry Choc. Chip

July 2 – Black Raspberry

July 9 – Banana

July 16 – Cookies and Cream

Summer Concerts on the Lawn

Concerts on the lawn in front of Duke Hall at 7 pm. Picnic baskets, lawn chairs, and blankets are welcome.

May 31Just Jazzin'

June 7The Ovation Singers

June 14Harrisonburg-Rockingham Concert Band

June 21Vocalists Offering Inspirational Community Enrichment

June 28The 29th Infantry Division Army Band

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 are playing this season at Long Field Mauck Stadium on campus. Games start at 5:00 pm.

Saturday, June 6 New Market

Sunday, June 7 Woodstock

Tuesday, June 9 Fauquier

Wednesday, June 10 Luray

Sunday, June 21 Haymarket

Friday, June 26 Front Royal

Saturday, June 27 Waynesboro

Sunday, June 28 Luray

Wednesday, July 1 Rockbridge

Thursday, July 2 Staunton

Sunday, July 5 Fauquier

Tuesday, July 7 Woodstock

Thursday, July 9 Covington

Saturday, July 11 Luray

Saturday, July 18 New Market

Sunday, July 19 Haymarket

Saturday, July 25 Woodstock

Sunday, July 26 New Market

Tuesday, July 28 Woodstock

Wednesday, July 29 New Market