

EARTH AND MINERAL SCIENCES

UNDERGRADUATE STUDENT HANDBOOK

2008 - 2009

Ryan Family Student Center
14 Deike Building
University Park, PA 16802

ems.psu.edu

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This publication is available on alternative media on request. Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce. EMS 09-12

PENNSTATE



MESSAGE FROM THE DEAN

Welcome to Penn State and the College of Earth and Mineral Sciences. The College has a national and international reputation for having very strong programs on topics that are of compelling and enduring interest to society. I don't think anyone can imagine a time in which materials, energy, the environment, natural resources, weather and climate, and people and places won't be important. However, the subject matter is only part of the EMS story.

You are joining a rather remarkable community of faculty and student scholars and a staff that has always had a reputation for wanting to assist students. All of these folks have been anticipating your arrival and the start of fall classes with some eagerness. To a very large extent, you are the reason why we are all joined together into a college within this university. So, don't hesitate to ask for help.

Take advantage of our student center. It is designed to enable you to interact with other students. The folks that work there have many years of wisdom when it comes to a successful Penn State experience. Our advisors and tutors are very capable and they truly enjoy helping students succeed. Knock on the door of the Student Council office if you want a deeper involvement in student life within the College or if you just want some advice from a seasoned student.

Think of your First Year Seminar as not just class, but as an opportunity to work with an instructor who is both a resource and mentor keenly interested in your success. Okay, it sounds like success and succeed are my favorite words. Why focus so strongly on our willingness to help you be successful? Your first semester is a time of extraordinary freedom and a time of new social experiences and challenges in the midst of the academic challenges of your first full set of Penn State classes. If you end your first semester knowing what it takes to meet and hopefully exceed your academic objectives, then you will have the best opportunity both to enjoy the rich experience of social life at this university and to achieve the knowledge you need for your future career.

Enjoy, succeed, and let us know how we can help.

William E. Easterling, Dean - College of Earth and Mineral Sciences

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EMS UNDERGRADUATE CONTACTS

Ryan Family Student Center
 14 Deike Building
 863-2751 or 865-7482
www.ems.psu.edu/students/studentcenter.html

Associate Dean for Education	John Hellmann jrh3@psu.edu
Administrative Assistant IV (Commencement/Student concerns)	Martha Traverse mjt5@psu.edu
Director of Academic Advising (College Liaison to DUS & Admissions)	Jonathan Merritt jhm3@psu.edu
Giles Writer-in-Residence, Writing Tutor	Joe Schall schall@ems.psu.edu 863-6077
Writing Tutor	Özlem Zabitgil oxz100@psu.edu
Mathematics, Chemistry and Physics Tutor; Academic Adviser	Jeff Warner jmw139@psu.edu 865-6355
Recruiter/Adviser	Stacy Davidson sjp123@psu.edu 863-5518
Information Technology Tutor	Tim Robinson robinson@ems.psu.edu 863-9691
Administrative Assistant I (Curriculum/Instruction)	Sue Lauver sel114@psu.edu
Administrative Assistant I (RFSC Programs/Operations)	Linda Spangler spangler@ems.psu.edu

Fletcher Byrom EMS Library

105 Deike Building
865-9517
www.libraries.psu.edu/emsl/

Librarian

Linda Musser
lrn4@psu.edu
863-7073

Hours:

Monday - Thursday:	7:45 am - 11:00 pm
Friday:	7:45 am - 9:00 pm
Saturday:	9:00 am - 9:00 pm
Sunday:	Noon - 11:00 pm

Email Contact:

ems@psulias.psu.edu

EMS Museum

19 Deike Building
www.ems.psu.edu/museum/

Museum Director

Russell Graham
116 Deike Building
rwg12@psu.edu
museum@ems.psu.edu
865-6336

Assistant

Julie Snyder
jxs1030@psu.edu
571-6317

Hours:

Monday - Friday:	9:30 am - 5:00 pm
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EMS Departmental Contacts

Energy and Mineral Engineering (EME)

110 Hosler Building
865-3437
www.eme.psu.edu

Department Head	Yaw D. Yeboah ydy1@psu.edu 865-0269
Administrative Assistant	Joan Andrews jxa1@psu.edu 863-1616
Associate Department Head	Mark Klima msk4@psu.edu 101 Hosler Building 863-7942
Undergraduate Programs Staff Assistant	Crystal Renaud cdr125@psu.edu 865-3437

Majors

Energy Business and Finance (EBF)

www.eme.psu.edu/ebf/

Undergraduate Program Officer	Andrew Kleit 507 Walker Building 865-0711 ank1@psu.edu
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Options: General (GEN)
 Geographic Information System (GIS)
 Energy Systems (ESYST)

Energy Engineering

www.eme.psu.edu/energyeng

Undergraduate Program Officer	Sarma Pisupati sxp17@psu.edu 865-0874
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Energy and Mineral Engineering (EME) Majors (continued)

Environmental Systems Engineering (ENVSE)

www.eme.psu.edu/environment

Undergraduate Program Officer

Thaddeus Ityokumbul
mti1@psu.edu
863-0375

Industrial Health and Safety (I H S)

www.eme.psu.edu/IHS

Undergraduate Program Officer

Joel Haight
jmh44@psu.edu
863-4491

Mining Engineering (MNG E)

www.eme.psu.edu/MNG

Undergraduate Program Officer

Larry Grayson
rlg19@psu.edu
863-1644

Petroleum & Natural Gas Engineering (PNG E)

www.pnge.psu.edu

Undergraduate Program Officer

Turgay Ertekin
eur@psu.edu
865-6082

Energy & Fuels Engineering Option (in Chemical Engineering)

www.ems.psu.edu/FSc/E&FEOption.htm

Undergraduate Program Officer

Semih Eser
sxe2@psu.edu
863-1392

Geography
302 Walker Building
865-3433
www.geog.psu.edu/undergrad

Department Head	Karl Zimmerer ksr2@psu.edu 865-3094
Undergraduate Advisor	Jodi Vender jvender@psu.edu 863-5730
Undergraduate Program Officer	Lorraine Dowler lxd17@psu.edu 863-1806
Associate Department Head	Brent Yarnal alibar@essc.psu.edu 863-4894
Staff Assistant/Receptionist	Kary Blaschak kdb6@psu.edu 865-3433

Major

Geography (GEOBS and GEOBA)

GEOBS options:

- General (GEN)
- Geographic Information Systems (G I S)
- Physical /Environmental (EGEOG)
- Human Geography (HGEOG)

Geosciences
543 Deike Building
865-7791
www.geosc.psu.edu

Department Head

Timothy Bralower
bralower@geosc.psu.edu
865-6711

Associate Department Head
for Undergraduate Programs

David Bice
dbice@geosc.psu.edu
865-4477

Undergraduate Programs
Staff Assistant

Carolyn Clark
cclark@geosc.psu.edu
865-7791

Majors

www.geosc.psu.edu/undergrads/index.html

[Geosciences \(GSCBS and GSCBA\)](#)

GSCBS Options:

General (GEN)

Hydrogeology (HYDRO)

[Earth Sciences \(EARTH\)](#)

[Geobiology \(GEOBI\)](#)

Materials Science and Engineering

124 Steidle Building
865-5765
www.matse.psu.edu

Department Head	Gary Messing messing@matse.psu.edu 865-2262
Administrative Assistant	Kathy Spicer spicer@matse.psu.edu 863-1779
Associate Head for Undergraduate Studies	R. Allen Kimel kimel@matse.psu.edu 865-5397
Advising and Counseling Assistant	Jenneth Layaou layaou@matse.psu.edu 865-5765
Staff Assistant	Allison Albinski ava10@matse.psu.edu 865-5766

Major

Materials Science and Engineering (MATSE)

Options:

Ceramic Science and Engineering (CERSE)
Electronic and Photonic Materials (EPM)
Metals Science and Engineering (METAL)
Polymer Science and Engineering (PLMSE)

Meteorology
503 Walker Building
863-8565
www.met.psu.edu

Department Head	William Brune brune@ems.psu.edu 865-3286
Associate Head Undergraduate Program	H. Nels Shirer shirer@meteo.psu.edu 863-1992
Staff Assistant	Rhonda Spsychalski rhonda@meteo.psu.edu 863-8565
Weather Station Coordinator	Bill Syrett wjs1@psu.edu 865-6172

Major

Meteorology (METEO)

Options:
www.met.psu.edu/dept/courses/options.html

- Air Quality (AIRQL)
- Atmospheric Sciences (ATMSC)
- Climatology (CLIM)
- Environmental Meteorology (ENVME)
- General (GEN)
- Weather Forecasting & Communications (FCAST)
- Weather Risk Management (WRM)

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EMS MINORS

Astrobiology (ABIOL)

<http://www.geosc.psu.edu/undergrads/minors/astrobiology.php>

Staff Contact: Linda Altamura (ASTRO) lxx2@psu.edu
 Faculty Contact: Jenny Macalady jlm80@psu.edu

Climatology (CLIMA)

http://www.geog.psu.edu/undergrad/minor_clima.html

Contact: Jodi Vender (GEOG) jvender@psu.edu
 Faculty Contact: Andrew Carleton carleton@essc.psu.edu

Earth Systems Science (EASYS)

<http://www.geosc.psu.edu/undergrads/minors/earthsystems.php>

Staff Contact: Sue Lauer (ADED) sel114@psu.edu
 Faculty Contact: C. Gregory Knight cgk@psu.edu

Electronic and Photonic Materials (E P M)

<http://www.matse.psu.edu/UG/degOpt/epmminor.htm>

Staff Contact: Allison Albinski (MATSE) ava10@psu.edu
 Faculty Contact: Suzane Mohney mohney@matse.psu.edu

Energy Engineering (ENENG)

Staff Contact: Crystal Renaud (EME) cdr125@psu.edu
 Faculty Contact: Sarma Pisupati sxp17@psu.edu

Energy Environmental and Mineral Economics (ENNEC)

Staff Contact: Rhonda Spsychalski (METEO) rhonda@meteo.psu.edu
 Faculty Contact: Andrew Kleit ank1@psu.edu

Environmental Inquiry / EMS (ENV I)

<http://www.envi.psu.edu>

Contact: Jodi Vender (GEOG) jvender@psu.edu
 Faculty Contact: Amy Glasmeier akg1@ems.psu.edu

EMS Minors (continued)

Geography (GEOG)

http://www.geog.psu.edu/undergrad/minor_geog.html

Contact:	Jodi Vender (GEOG)	jvender@psu.edu
Faculty Contact:	Loraine Dowler	lxdl7@psu.edu

Geographic Information Science (GIS)

http://www.geog.psu.edu/undergrad/minor_gis.html

Contact:	Jodi Vender (GEOG)	jvender@psu.edu
Faculty Contact:	Alan MacEachren	maceachren@psu.edu

Geosciences (GEOSC)

<http://www.geosc.psu.edu/undergrads/minors/geosciences.php>

Staff Contact:	Carolyn Clark (GEOSC)	cclark@geosc.psu.edu
Faculty Contact:	David Bice	dbice@geosc.psu.edu

Global Business Strategies (GBS)

<http://www.ems.psu.edu/students/globalbus.html>

Staff Contact:	Rhonda Spsychalski (METEO)	rhonda@meteo.psu.edu
Faculty Contact:	Andrew Kleit	ank1@psu.edu

Industrial Health and Safety (IHS)

Staff Contact:	Crystal Renaud (EME)	cdr125@psu.edu
Faculty Contact:	Joel Haight	jmh44@psu.edu

Information Science and Technology - for EMS (ISEMS)

http://www.geog.psu.edu/undergrad/minor_isems.html

Contact:	Jodi Vender (GEOG)	jvender@psu.edu
Faculty Contact:	Alan MacEachren	maceachren@psu.edu

EMS Minors (continued)

Marine Sciences / IC (MARSC)

<http://www.ems.psu.edu/students/marine/index.html>

Staff Contact:	Sue Lauver (ADED)	sel14@psu.edu
Faculty Contact:	Lee Kump	lkump@psu.edu

Meteorology (METEO)

Staff Contact:	Rhonda Spychalski (METEO)	rhonda@meteo.psu.edu
Faculty Contact:	Nels Shirer	shirer@meteo.psu.edu

Mining Engineering (MNG E)

Staff Contact:	Crystal Renaud (EME)	cdr125@psu.edu
Faculty Contact:	Larry Grayson	rlg19@psu.edu

Polymer Science (PLMSC)

Staff Contact:	Alison Albinski (MATSE)	albinski@matse.psu.edu
Faculty Contact:	Paul Painter	pcp1@psu.edu

Science, Society and the Environment of Africa (SSEA)

<http://www.geosc.psu.edu/undergrads/minors/SSEA.php>

Staff Contact:	Carolyn Clark (GEOSC)	cclark@geosc.psu.edu
Faculty Contact:	Tanya Furman	furman@geosc.psu.edu

Watersheds and Water Resource (W W R)

<http://www.ems.psu.edu/students/watersheds.html>

Staff Contact:	Sue Lauver (ADED)	sel14@psu.edu
Faculty Contact:	C. Gregory Knight	cgk@psu.edu

For information about these and other minors at Penn State please visit the following web site:

<http://www.psu.edu/dus/handbook/minors2.html#list>

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EMS ORGANIZATIONS

EMS Undergraduate Student Organizations

Earth and Mineral Sciences Student Council

<http://www.ems.psu.edu/sc/>

Advisor	Jeff Warner jmw139@psu.edu	14 Deike Building 865-6355
Student Council President	Rachel Duran	rcd5031@psu.edu
Vice President	Andrew Rengel	
Secretary	Laura Jean Lucca	
Treasurer	Jake Kerr	
Director of Activities	Phil DeCastro	

Earth and Mineral Sciences Interest House (Irvin Hall)

<http://www.irvin.psu.edu>

Advisor	Mark Klima msk4@psu.edu	101 Hosler Building 863-7942
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Marine Sciences Society

<http://www.clubs.psu.edu/up/marinescience/>

Advisor	Robert Minard rminard@psu.edu	522 Walker Building 865-2202
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EMS Undergraduate Student Organizations

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Energy and Mineral Engineering

Penn State Mining Society The Student Chapter for the Society for Mining, Metallurgy, and Exploration, Inc.

<http://www.eme.psu.edu/ProfessionalSocieties/mngsoc.html>

Advisor	Maochen Ge mug10@psu.edu	201 Hosler Building 865-5861
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Society of Environmental Systems Engineers

<http://www.eme.psu.edu/ProfessionalSocieties/SESEsoc.html>

Advisor	Mark Klima msk4@psu.edu	101 Hosler Building 863-7942
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Society of Petroleum Engineers

<http://www.eme.psu.edu/ProfessionalSocieties/spesoc.html>

Advisor	Zuleima Karpyn ztk101@psu.edu	151 Hosler Building 863-2273
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Penn State University Industrial Health and Safety Society

<http://www.eme.psu.edu/ProfessionalSocieties/IHSsoc.html>

Advisor	Joel Haight jmh44@psu.edu	224 Hosler Building 863-4491
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Energy Business and Finance Society

<http://www.eme.psu.edu/ProfessionalSocieties/ebfsociety.html>

Advisor	Andrew Kleit ank1@psu.edu	507 Walker Building 865-0711
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Energy Club

Advisor	Jeffrey Brownson nanomech@psu.edu	212 Hosler Building 865-8473
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EMS Undergraduate Student Organizations

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Geography

Gamma Theta Upsilon

<http://www.geog.psu.edu/gtu>

Advisors	Loraine Dowler lxd17@psu.edu	324 Walker Building 863-1806
	Jodi Vender jvender@psu.edu	305 Walker Building 863-5730

Underdogs

<http://www.geog.psu.edu/underdogs/>

Advisor	Loraine Dowler lxd17@psu.edu	324 Walker Building 863-1806
	Jodi Vender jvender@psu.edu	305 Walker Building 863-5730

SWG (Supporting Women in Geography)

<http://www.geog.psu.edu/swig/>

Advisor	Jodi Vender jvender@psu.edu	305 Walker Building 863-5730
	Melissa Wright mww11@psu.edu	314 Walker 865-9133

Geosciences

Penn State Geological Sciences Club

<http://www.geosc.psu.edu/geoclub/>

Advisor	Tim Bralower bralower@geosc.psu.edu	503 Deike Building 865-6711
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EMS Undergraduate Student Organizations (continued)

Materials Science and Engineering

Keramos National Professional Ceramic Engineering Fraternity

<http://www.matse/psu.edu/grugshared/stOrg.htm>

Advisor	R. Allen Kimel kimel@matse.psu.edu	124 Steidle Building 865-5397
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Material Advantage and Materials Research Society

Advisor	R. Allen Kimel kimel@matse.psu.edu	124 Steidle Building 865-5397
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Polymer Science Club

Advisor	Paul Painter painter@ems.psu.edu	320 Steidle Building 865-5767
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Penn State Chapter Materials Research Society

<http://www.clubs.psu.edu/UP/MRS>

President	Adam Stevenson ajs515@psu.edu	7B Steidle Building 865-2401
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EMS Undergraduate Student Organizations

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Meteorology

Campus Weather Service (CWS)

<http://cws.met.psu.edu>

Advisor	Bill Syrett wjs1@psu.edu	608 Walker Building 865-6172
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Chi Epsilon Pi Honor Society

<http://www.met.psu.edu/dept/studorg/chiepsilonpi.html>

Advisor	H. Nels Shirer shirer@meteo.psu.edu	518 Walker Building 863-1992
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Penn State Branch, American Meteorological Society

<http://www.met.psu.edu/dept/studorg/bams.html>

Advisors	Jerry Harrington harring@meteo.psu.edu	517 Walker Building 863-1584
	Marisa Ferger mferger@psu.edu	608A Walker Building 863-4229

EMS COLLEGE RESOURCES

Financial Aid www.psu.edu/studentaid/

There are many sources of financial aid. An excellent website for understanding the financial aid system, as well as for private scholarship databases is www.psu.edu/studentaid/.

If you have a work study grant, use the elion web site (<https://elion.oas.psu.edu>) to see available jobs. If you want an on-campus job but don't have a work study grant, go to "useful links" link of the Student Aid site and go to wage-payroll opportunities.

The College of Earth and Mineral Sciences provides over \$400,000 annually in scholarship support for students beyond their first year. If your GPA at the end of your first-year is 3.40 or better, and if you have applied for scholarship support, you are guaranteed an EMS scholarship. To apply, go to: www.ems.psu.edu/students/application.html and complete the on-line application any time between **January 1st and April 15th**. This application is also used to determine scholarship support from your academic department. Some of these awards are "need-based," so if you have submitted the FAFSA (Free Application for Federal Student Aid) you may be eligible for support even if your GPA is below 3.40.

Also, low-interest loans (6% simple interest after graduation) are available through the *Matthew J. Wilson Loan Fund*. Students with documented financial need may borrow up to \$1200 per semester (\$2400 per year) through the fund. Applications are available in the Ryan Family Student Center, 14 Deike Building.

The University's Undergraduate Fellowship Office (UFO) maintains a database of private foundation scholarships for which EMS students are eligible. The database is frequently updated to focus on scholarships with impending application deadlines. Check out: <http://www.ufo.psu.edu/ems.htm>

Advising

Every EMS Student is assigned a primary academic advisor who is a faculty member in the student's intended major. If you do not know who your faculty advisor is, check the advisor information on elion (<http://www.elion.oas.psu.edu>) or contact your academic department. All first-year EMS students will also be assigned a secondary advisor who is one of the professional advisors in the EMS Student Center. (Stacy Davidson, Jon Merritt, and Jeff Warner). In general, your faculty advisor is your best source of information regarding your major. Student Center advisors are here to answer questions that are NOT specific to your major, or to substitute for your faculty advisor if they are not available (on short notice!)

All first-year students and some advanced standing students are not officially in an EMS major. Rather, their major assignment is EM SC, the College's official pre-major status. Entry to the EMS major of your choice can occur as early as the beginning of your 2nd semester, provided your GPA is 2.00 or better. Expect to be contacted via email by Jon Merritt who will ask whether you wish to enter a major or remain in EM SC. Note that there is no disadvantage to being in pre-major status; and if you are exploring more than one major it is appropriate to remain in EM SC status. Note that you must elect a major by the end of your 4th semester!

The College's advising philosophy is straightforward and open-minded. We encourage creative advising to enable a student to do the innovative: to study abroad, learn a language, take a minor, specialize in information technology. We welcome proposals to substitute more demanding courses and experiences for the minimum requirements listed in the Bulletin. (<http://bulletins.psu.edu/bulletins/bluebook/>) The College has reduced the number of required credits so that students can develop such options.

The general principles underpinning our advising philosophy are:

- More demanding courses may be substituted for less demanding courses.
- Virtually equivalent courses, or a combination of virtually equivalent courses, can act as substitutes for other courses (e.g., E MCH 211 and 213 together could be substituted for E MCH 210).
- No credit is granted toward baccalaureate graduation for remedial courses (e.g., MATH 004, ENGL 004, CHEM 101).
- Once you have declared your EMS major, all exceptions to degree requirements require completion of an EMS "Request for Exception to Program Requirements" form (available at your departmental office). Such

Advising (continued)

exceptions include course substitutions, course waivers, and exceptions to General Education requirements. While all students must take a minimum of 3 credits in each of the GenEd “Knowledge Domains”— Humanities, Social and Behavioral Sciences, Arts — a student may request substitution, for example, of a GH course for a GA course, creating a “9-6-3” sequence (i.e., 9 credits in GH, 6 credits in GS, and 3 in GA). In addition, all EMS students (except GSCBA and GEOBA majors) may substitute a foreign language course at or above the 3rd level (e.g. Span 003) for 3 credits of GenEd.. Keep in mind that you must have a minimum of 3 credits in each domain, and that GenEd requirements may not be satisfied by any courses in your major (e.g., a GS geography course will not meet GenEd requirements for a Geography major). Please refer to Penn State’s General Education website: http://bulletins.psu.edu/bulletins/bluebook/general_education.cfm

- EM SC 100S, our First-Year Seminar, has been approved as a GenEd Writing/Speaking (GWS) course. Depending on your intended major, you will be able to substitute EM SC 100S for either CAS 100A or ENGL 202. Check with your advisor! All EMS engineering students and EBF students must take ENGL 202.

For all EMS students, regardless of your major, keeping track of your academic progress is facilitated by referring to:

- Your **Degree Audit**. The degree audit is a document that indicates how both the courses you are taking and those you have completed mesh with the requirements of your major. You can access your audit via elion at: <https://www.elion.oas.psu.edu>. Specify your intended major since an “EMSC” audit is generic.
- The **check sheet** and/or the idealized eight-semester course sequence provided to you by your academic advisor (and often available on your department’s web site). See also: www.ems.psu.edu/students/schedules/.
- A **minor** is an academic program that supplements a major. Minors require a minimum of 18 credits and typically no more than 21 credits with at least 6 but ordinarily not more than half of the credits at the 400 level. A minor program may consist of course work in a single area or from several disciplines. In most cases, students do not have to be enrolled in the college that offers a particular minor in order to pursue that minor. More than one minor can be completed if a student is interested in developing an emphasis in additional disciplines. For a complete list

Advising (continued)

of university minors as well as additional information please see the following web site: <http://www.psu.edu/dus/handbook/minors2.html>

- The College also has several disciplinary and interdisciplinary minors to complement almost any degree program. For a complete listing of EMS minors see pages 9-11.

Writing Tutoring

<http://www.personal.psu.edu/faculty/u/3/u3w/schall.html>

Earth and Mineral Sciences is the only science college at the University (and perhaps the only one in the country) to offer free writing tutoring exclusively to its students. EMS students are invited to see Joe Schall or Özlem Zabitgil (863-6077, 14 Deike Building) for help with writing papers, resumes, and applications. Because the College recognizes the need for good writing in the sciences and offers so many opportunities for writing in its coursework, you will want to take advantage of our tutoring services on a regular basis. Joe has also written a manual, called *Style for Students*, to help you with your writing, with advice on everything from using punctuation to writing term papers to writing resumes. To get a free copy of the manual, visit the Writing Center in 14 Deike Building.

Writing-Intensive Courses

Writing-intensive courses are courses designated by a “W” after their number. An “M” suffix signifies that a course is both writing intensive and an honors course. A “Y” suffix signifies that a course is both writing intensive and is a designated US and/or International Cultures Course. University-wide, all students must complete at least three credits of W-courses (either all in one course or in a combination of courses) as part of their graduation requirements. The course(s) must be offered by the college of enrollment. In the College of Earth and Mineral Sciences, we’ve made sure to develop W-courses as an inherent part of the upper-level load in each student’s curriculum, so you will probably automatically be taking one or more such courses in your junior or senior year.

Writing-Intensive Courses (continued)

The following is a list of EMS "W" courses offered either FA08 or SP09:

EM SC 470W	GEOSC 402Y	MATSE 484W
	GEOSC 409W	MATSE 485W
	GEOSC 413W	MATSE 492W
ENNEC 484W	GEOSC 494W	MATSE 494W
	GEOSC 470W	
GEOEE 404W		METEO 418W
	I H S 495W	METEO 440W
GEOG 310W		METEO 471W
GEOG 412W	EGEE 464W	METEO 472W
GEOG 420Y		METEO 475W
GEOG 423Y		METEO 480W
GEOG 438W		
GEOG 426Y		MNG 451W
GEOG 411W		
GEOG 461W		PNG 440W

Your academic advisor will help you to be sure that you are enrolled in the proper W-courses for your program. Courses with "Y" suffix are both writing intensive and US/International Cultures

Mathematics, Physics, and Chemistry Tutoring

Tutoring in mathematics is provided by Jeff Warner (Room 14 Deike Building 865-6355). All mathematics courses prescribed for majors in the College are covered, as are prescribed physics and chemistry courses. Students who require continuous tutoring throughout the semester are advised to schedule regular meetings with Jeff by appointment typically from 8:30 am - 5:00 pm when he is not teaching. Jeff will also be available some evenings although drop-in visits are also accommodated when possible.

Information Technology Tutoring

Tim Robinson is the Information Technology resource person for the College. Tim is available for consultation and tutoring in web page development, presentation skills, and multi-media development. To provide students with a place to create computer-based materials, the EMS Student Center (14 Deike Building) has computers, cameras, and corresponding software available from 8:00 am - 8:00 pm weekdays.

Irvin Hall

www.irvin.psu.edu

Irvin Hall is home of the EMS Special Living Option (Interest House), which brings together students who are fascinated by the Earth, its resources, and the materials that sustain civilization. It is primarily for students enrolled in the College of Earth and Mineral Sciences, although students from other curricula are welcome. House members participate in a wide range of academic events (such as faculty mixers, guest speaker presentations, and field trips) and social activities (such as intramural sports, house dinners, and football tailgates). Irvin Hall is co-ed by floor and is situated in the West Halls residence area, which is conveniently located near the buildings of the EMS College. The House has a private computer facility and two study lounges for member use. Students interested in living in Irvin Hall can pick up an application in the EMS Ryan Family Student Center, 14 Deike Building (or on-line at the website).

EMS Undergraduate Social Hour

Continue one of the college's best traditions! Every Thursday afternoon 3:30 pm-4:30 pm in the Fall and Spring Semesters, EMS students convene in the Student Center for pizza and casual conversation. Please join us as your schedule permits!

GEMS

Graduates of Earth and Mineral Sciences Alumni Society

www.ems.psu.edu/alumni/index.html

The EMS alumni constituent society, GEMS (Graduates of Earth and Mineral Sciences), was formed in 1990. As a society, it serves alumni, students, faculty, and the College of Earth and Mineral Sciences by building lifelong relationships that enable students to achieve their goals in an increasingly global and diverse workplace.

The society is led by a Board of Directors that is representative of the diverse EMS alumni body and its interests. A formal committee structure facilitates program planning and activities that support the GEMS mission. These activities include regional alumni events, the GEMS tailgate, reunion weekend lunches, recruiting, student mentoring, commencement receptions, and contributions to publications.

As a student, you benefit from the experience and success of those who went before you. As an EMS graduate, you will have the insight and perspective to become a critical component of the EMS network through our alumni society. A one-year membership is automatically yours upon graduation. Become familiar now with GEMS and plan to continue your Penn State relationship through the years.

Do you want to receive Penn State Alumni Association (PSAA) member benefits while you are still a student? Interested in joining the biggest, the best, the most ambitious association in the world? For nearly 135 years, the PSAA has been the keeper of Penn State pride and traditions. You can become a member of the Blue & White Society, the student contingent of the largest dues-paying alumni association in the world! If you are interested, please contact our Director of Alumni Relations.

EMS College Liaison:
Director, Alumni Relations
116 Deike Building

Colleen Swetland
863-4667
clw2@psu.edu

Diversity in EMS and at Penn State

In the fall 2007, Dean Easterling appointed the college's first Associate Dean for Educational Equity, Dr. Catherine Lyons. Dr. Lyons is a member of the College leadership team, reports to the Dean, and serves on the College's Executive Council. The Associate Dean works with the College faculty, staff administrators, students and alumni to promote a diversity and climate that empowers present and future generations of scholars. Responsibilities will also include coordination with the Office of the Vice Provost for Educational Equity (<http://www.equity.psu.edu/>). To learn more about Dr. Lyons, visit <http://www.ems.psu.edu/EducationalEquity/>.

We highly recommend *A Framework to Foster Diversity at Penn State* (excerpt below) as an important reference for our students:
<http://www.equity.psu.edu/Framework/index.html>.

"Our longstanding commitment to diversity and equity grows out of our historic mission. As a land grant institution, Penn State is charged to make education available to the sons and daughters of the working classes. This emphasis on access is addressed, in part, by our recruitment and retention of a diverse student body. While efforts to address inequities experienced by racial/ethnic minorities and women constitute an important foundation for diversity efforts, they by no means delimit the scope of efforts necessary for an inclusive institution. The American with Disabilities Act (ADA), 1990, for example, mandates equity of access to academic programs and employment opportunities for individuals with disabilities. . . Penn State's nondiscrimination statement includes sexual orientation as a category for which protection against discrimination and harassment is mandated. Veterans and adult learners constitute important populations that contribute richly to diverse classroom experiences. . ."

Penn State's Nondiscrimination Statement:

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University does not discriminate against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discrimination or harassment against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901; tel. 814-863-4700/V; 814-863-1150/TTY.

Please also note that Martha Traverse is a member of Penn State's support network as an ally for the Lesbian, Gay, Bisexual, Transgender (LGBT) student body. Please feel free to drop by and chat! Martha's office is directly across from the Student Council Office in the Ryan Family Student Center. The LGBT rainbow sign is on her office door.

EMS Listservs

The College of Earth and Mineral Sciences wants you to stay informed. Access your Penn State email account regularly! You will be on a college-wide undergraduate email listserv. Very likely, you will also be on a listserv for your academic department. Not all news items will affect you personally, but ignoring these messages could be a big mistake!

STAY CONNECTED!!!!

Safety First

Your health and safety here in the College of Earth and Mineral Sciences and within the University are our principal concerns. You can access safety policies at: <http://www.ems.psu.edu/research/safety/>

If you become aware of any hazard, contact one of the college's safety offices (continued on next page).

Rhonda Stoner - College Safety Officer
248 Deike Building
814-865-5709
rqs8@psu.edu

University Contact information:

Fire & Accident
911

Police Services
863-1111

Hazardous Material Release
865-6391

Environmental Health and Safety
865-6391

Physical Plant Service Desk
865-4731

EMS Safety Contacts

Lisa Skripek - AESEDA
221 Walker Building
814-863-7598
lms4@psu.edu

Tom Motel - Energy and Mineral Engineering
107 Hosler Building
814-863-1635
tjm14@psu.edu

Bob Hibbert - Geography
302 Walker Building
814-865-8116
rlh23@psu.edu

Scott Henninger - Materials Science and Engineering
2 Hosler Building
814-865-3568
shenninger@psu.edu

Al Moyle - Meteorology
503 Walker Building
863-4526
amm14@psu.edu

Timothy White - Earth & Environmental Systems Institute
2217 Earth Engineering Science Building
814-865-2213
tws113@psu.edu

Ron Wasco - Energy Institute
209 Academic Activities
814-863-5384
rxw19@psu.edu

Denny Walizer - Geosciences
18 Hosler Building
814-863-2023
dpw3@psu.edu

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EMS COMPUTER FACILITIES

Ryan Family Student Center

14 Deike Building, 863-2751

Hours: M-F 8:00 am - 8:00 pm

Who may use: EMS Undergraduates ONLY

Contact Person: Linda Spangler

Equipment Available:

Dell PC's, Laser Printer (no charge for paper)

Equipment available for loan: (see Tim Robinson)

Digital Video Cameras, Digital Still Cameras, Dell Laptops, Computer/Video Projectors

EMS Library

105 Deike Building, 865-9517

Hours:	Monday-Thursday	7:45 am-11:00 pm
	Friday	7:45 am-9:00 pm
	Saturday	9:00 am-9:00 pm
	Sunday	12:00 pm-11:00 pm

Who may use: Anyone

Contact Person: Linda Musser

Equipment Available:

PC's with Office Suite-Powerpoint, Laser Printer (5 cents per page), Light Table, TV/VCR, DVD Player, Scanner with Photoshop

Earth and Mineral Sciences Computer Facilities (continued)

Energy and Mineral Engineering

318 Hosler Building, 863-1560

Hours: 24 hours per day
Who may use: EME Students Only
Contact Person: Bob Byers

Equipment available:

16 Computers, 1 HP Laser Jet 4200, 2 Scanners

Department of Geography

Advanced Geographic Information Systems Lab (AGIS):
123 Walker Building, 865-8116

Hours: M-F 8:00 a.m. - 5:00 p.m. when not used by classes;
accessible at other times with permission
Who may use: Geography Students, Faculty, and Staff; requires de-
partmental account different from PSU Access Account
Contact Person: Bob Hibbert, rlh23@psu.edu

Equipment available:

16 PCs running Windows 2000 workstation and one printer; software in-
cludes ArcGIS, Acrobat Reader, Photoshop, Illustrator, Flash, Java 2 runtime
environment, Office 2000, Visual Studio, Visio, web browsers, email clients,
Oracle OraHome81, QuickTime, RealPlayer SSH Secure Shell, WS_FTP LE, and
Wiley NML

Earth and Mineral Sciences Computer Facilities (continued)

Department of Geography (continued)

Instructional Computing Lab
208 Walker Building, 865-8116

Hours: M-F 8:00 a.m. - 5:00 p.m. when not used by classes;
accessible at other times with permission

Who may use: Geography Students, Faculty, and Staff; requires de-
partmental account different from PSU Access Account

Contact Person: Bob Hibbert, rlh23@psu.edu

Equipment available:

22 PCs running Windows 2000 workstation and one printer; software in-
cludes Acrobat Reader 5.0, Illustrator 7.0, Adobe Photoshop 5.5, ArcGIS,
Dimple 32, Express Scribe, Eudora, Geoda096, GeoVISTA Studio, Internet
Explorer Microsoft Office 2000, web browsers, email clients, QuickTime, SSH
Secure Shell, U.S. Geological Survey (DEM 3D, DLGv32 Pro, Waypoint), Wiley
NML, Windows Media Player, WinZip, WS-FTP LE, SAS, SP SS 11.0. LCD projec-
tor in ceiling

Instructional Computing Lab
229 Walker Building, 865-8116

Hours: M-F 8:00 a.m. - 5:00 p.m. when not used by classes;
accessible at other times with permission

Who may use: Geography Students, Faculty, and Staff; requires de-
partmental account different from PSU Access Account

Contact Person: Bob Hibbert, rlh23@psu.edu

Equipment available:

12 PC computers running Windows 2000 workstation, one printer, and a
flatbed scanner. Software includes: Acrobat Reader, ArcGIS, ER Mapper 6.3,
Microsoft Office 2000, email clients, web browsers, QuickTime, SSH Secure
Shell, U.S. Geological Survey (DEM 3D, DLGv32), Wiley NML, Windows Media
Player

Earth and Mineral Sciences Computer Facilities (continued)

Department of Geosciences

337 Deike Building, 863-7437

Hours: 24 Hours a day

Who may use: Geosciences Students, Faculty and Staff

Contact Persons: Tom Canich, Damian Futrick
332 Deike Building sysadmin@geosc.psu.edu

Equipment available:

14 Windows XP Workstations, Color Phaser printer, Slidemaker, Scanner, B&W high speed laser printer, 42" color plotter, 7 sun solaris workstations, 7 Redhat Linux Workstations

Note: All Geosciences windows Lab PC's have Photoshop 7, Acrobat 5, Illustrator 10, and MS Office 2003. Select PC's have additional specialized software.

(Priority to teaching and class work)

Department of Materials Science and Engineering

119 Steidle Building, 865-2692

Hours: 24 Hours a day via card access

Who may use: MATSE Students

Contact Person: Frank Driscoll
driscoll@matse.psu.edu

Equipment available:

33 Dell Pentium4 PC's with MS Office and specialized software. 2 Laser Printers, 1 Scanner 1 Overhead Projector for teaching classes.

Earth and Mineral Sciences Computer Facilities (continued)

Department of Meteorology

<http://www.met.psu.edu/dept/computers>

616 Walker Building

*Fall 2008 only - located in 530 Walker Building

Hours: 24 Hours a day via card access

Who may use: Meteorology students/faculty

Contact Persons:	Chad Bahrmann	412 Walker
	Harry Henderson	623 Walker
	Art Person	622 Walker
	Chuck Pavloski	624A Walker

Send all email for help to: support@meteo.psu.edu

Equipment available:

36 Dual Boot Windows/Linux Workstations, Scanning and printing facilities.

608A Walker Building

*Fall 2008 only - located in 529 Walker Building

Hours: 24 Hours a day via card access
7:00 am-4:30 pm

Who may use: Meteorology students/faculty/staff

616 Walker Building

Equipment available:

29 Dual Boot Windows/Linux Workstations, 1 Meteo instructor workstation.

Earth and Mineral Sciences Computer Facilities (continued)

Department of Meteorology (continued)

<http://www.met.psu.edu/dept/computers>

615 Walker Building

Hours: Remote accessible with permission

Who may use: Undergraduates with faculty sponsor/
permission

Equipment available:

30 undergraduate research cluster

Equipment available:

37 machines including instructors

126 Walker Building

Hours: During class periods

Who may use: Meteorology students/faculty/staff

For remote ssh network access to Linux machines:

Lethe.met.psu.edu, stokes.meteo.psu.edu

For computer accounts: Contact Bob Ziegler, (rfz1@psu.edu) 427 Walker Building

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GENERAL UNIVERSITY POLICIES & RULES

Your life at Penn State consists of much more than your coursework. You are part of a community. You have rights and privileges, but also policies to which you must adhere and rules you need to follow. All of these non-academic policies and rules can be accessed at <http://guru.psu.edu/policies/>. In particular, note the administrative policies and the safety policies.

Basic Academic and Classroom Concerns

www.psu.edu/dus/handbook

The *Undergraduate Advising Handbook* is a veritable mother load of useful information, from grade-point calculation to course late drop/add policies, to study abroad (International Education Programs and Studies, IEPS), to changes-of-major. You can find it all on the web. Bookmark it!!!!

Both students and instructors are expected to be familiar with and adhere to the policies detailed in *The University Faculty Senate Policies and Rules for Undergraduate Students* (www.psu.edu/ufs/policies/). These policies tell you what instructors expect from you and what you have a right to expect from them. The most pertinent policies are summarized below. Note how they define students' academic rights and enhance the exploratory nature of a semester's first ten calendar days for students.

Students should attend all classes and be responsible for all class work; instructors should provide an opportunity for students who miss classes for legitimate reasons (e.g., academic field trips, required athletic events, serious illness, etc.) to do make-up work.

At the beginning of each course, it is the responsibility of the instructor to provide students with a statement clarifying the relevant criteria for academic integrity.

- It is understood that the rules of good scholarship apply in the College of Earth and Mineral Sciences. This means that students always submit their own work, or give proper credit when documenting sources or submitting work jointly. (See: www.ems.psu.edu/students/integrity/statement.html.)
- When submitting jointly prepared lab reports or work that has been revised from another class, a student's best bet is to exercise common sense and honesty. Plagiarism is always a serious offense.
- During the first ten days of a semester, students must be given written notification of general examination procedures, including those pertaining to the final examination. A student may drop a course during the first 10 calendar days of a semester without penalty; after the 10th day special circumstances apply, and the student should discuss these with an advisor.
- During the final week of classes, no examinations are to be scheduled (quizzes are permitted)

Basic Academic and Classroom Concerns

(continued)

- Students have the right to expect instructors to act responsibly—therefore, to uphold University policies and to meet all classes. *Policies and Rules for Undergraduate Students* offers advice on how a student can resolve a legitimate complaint about an instructor (See “Resolution of Student Classroom Problems”).
- Students not having the appropriate prerequisite courses or proper academic standing may be asked to drop courses during the first 10 days of classes.
- Professors in Earth and Mineral Sciences set high standards for classroom conduct. These include courtesy, tolerance, and an opportunity for all to realize their potential. In no case should there be any harassment, special privileges, or a chilly climate for anyone!

Again, the above is simply a summary of basic academic and classroom concerns. For more specific information, you should consult <http://www.psu.edu/ufs/policies/>.

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MISCELLANEOUS UNIVERSITY RESOURCES

Penn State University home page:

<http://www.psu.edu>

Penn State Office of Student Aid:

<http://www.psu.edu/studentaid>
314 Shields Building
Telephone: 814-865-6301

Penn State Office of the Bursar:

103 Shields Building
Telephone: 814-865-6528

Penn State Office of the Registrar:

112 Shields Building
Telephone: 814-865-6357

Penn State Housing Assignment Office:

Telephone: 814-865-7501

Penn State Undergraduate Admissions Office:

201 Shields Building
Telephone: 814-865-5471

Penn State University Health Services:

Student Health Center
Telephone: 814-863-0774

Transportation:

Greyhound Bus Information (Local): 814-238-7971
Greyhound Bus Information (24 hours): 800-231-2222
CATA Local Buses: 814-238-2282
Handy Delivery Taxi: 814-353-6001

Miscellaneous University Resources

(continued)

Sign up for PSUTXT to receive emergency information

Penn State encourages students, faculty and staff to enroll in PSUTXT, an easy and accessible system that lets them know via cell phone when classes are canceled due to weather conditions or if the campus has an emergency situation. Sign up now for PSUTXT and, when necessary, Penn State will send a text message alert directly to your cell phone and/or e-mail account.

To register, visit <http://newswires.psu.edu> and click on the PSUTXT REGISTER button at the bottom of the page to sign up. For information, contact Annemarie Mountz at amountz@psu.edu



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ACADEMIC CALENDAR

Academic Calendar and Important Dates

The following pages provide you with a basic Penn State calendar to help you with your planning.

For additional important academic dates including registration deadlines, commencements, holidays and breaks please review the University Academic Calendar. http://www.registrar.psu.edu/academic_calendar/calendar_index.cfm

Notes:

Projects Due:

August 2008

SUN

MON

TUE

WED

THU

FRI

SAT

					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
					Arrival Day (New Students)	Arrival Day (New and Returning Students)
24	25	26	27	28	29	30
Arrival Day (Returning Students)	Classes Begin	Drop/Add Period - August 25 - September 3				
31						

Projects Due:

September 2008

SUN MON TUE WED THU FRI SAT

	1	2	3	4	5	6
	Labor Day NO Classes			Late Registration and Late Drop Begin		
	Drop/Add Period					
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				
	Final Exam Conflict - Filing Period September 29-October 19					

Projects Due:

October 2008

SUN

MON

TUE

WED

THU

FRI

SAT

			1	2	3	4
				Final Exam Conflict - Filing Period September 29-October 19		
5	6	7	8	9	10	11
	Final Exam Conflict - Filing Period September 29-October 19					
12	13	14	15	16	17	18
	Final Exam Conflict - Filing Period September 29-October 19					
19	20	21	22	23	24	25
26	27	28	29	30	31	

Projects Due:

November 2008

SUN

MON

TUE

WED

THU

FRI

SAT

						1
2	3	4	5	6	7	8
9	10	11	12	13	14 Late Drop Deadline	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
Thanksgiving Holiday - NO Classes						
30						

Projects Due:

December 2008

SUN

MON

TUE

WED

THU

FRI

SAT

	1	2	3	4	5	6
7	8	9	10	11	12	13
					Classes End Withdrawal Deadline	Study Days No Classes
14	15	16	17	18	19	20
Study Days No Classes						Commencement
	Final Exams					
21	22	23	24	25	26	27
28	29	30	31			

Projects Due:

January 2009

SUN MON TUE WED THU FRI SAT

				1	2	3
4	5	6	7	8	9 Leave of Absence Deadline	10 Arrival Day New Students
11 Student Reg- istration Deadline	12 Classes Begin	13	14	15	16	17
Drop/Add Period - January 12 - 21						
18	19 Martin Luther King Day No Classes	20	21	22 Late Registration and Late Drop Begin	23	24
Drop/Add Period						
25	26	27	28	29	30	31

Projects Due:

February 2009

SUN

MON

TUE

WED

THU

FRI

SAT

1

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21

Final Exam Conflict - **Filing Period**
February 16 - March 8

22

23

24

25

26

27

28

Projects Due:

March 2009

SUN MON TUE WED THU FRI SAT

1 2 3 4 5 6 7

Final Exam Conflict - **Filing Period**
February 16 - March 8

8 9 10 11 12 13 14

Spring Break - **NO Classes**

15 16 17 18 19 20 21

22 23 24 25 26 27 28

29 30 31

Projects Due:

April 2009

MON

TUE

WED

THU

FRI

SAT

			1	2	3	4
5	6	7	8	9	10 Late Drop Deadline	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Projects Due:

May 2009

SUN MON TUE WED THU FRI SAT

					1 Classes End Withdrawal Deadline	2 Study Day
3 Study Day	4	5	6	7	8	9
Final Exams						
10	11	12	13	14	15 Commencement May 15 - 17	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Projects Due:

June 2009

SUN

MON

TUE

WED

THU

FRI

SAT

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Projects Due:

July 2009

SUN

MON

TUE

WED

THU

FRI

SAT

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	