

College of Engineering, SIUC
UCOL 101E – Foundations of Inquiry: Introduction to Engineering
Fall 2013

Instructors:

James Mathias, Ph.D., P.E. Course Coordinator Associate Professor Mechanical Engineering and Energy Processes Office: EGRE 024 Phone: 618-453-7016 Email: mathias@enr.siu.edu Office Hrs: MWF 1 - 3 p.m.	Lalit Gupta, Ph.D. Professor and Associate Chair Electrical and Computer Engineering Office: EGRE 118 Phone: 618-453-7032 Email: lgupta@siu.edu Office Hrs: MWF 1 - 2 p.m.	John Warwick, Ph.D., P.E., P.H., D.WRE Professor and Dean College of Engineering Office: ENGE 102 Phone: 618-453-4321 Email: warwick@siu.edu
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Guest Instructors:

Dr. Sanjeev Kumar; Professor & Chair, Department of Civil & Environmental Engineering.
Dr. Sam Spearing; Associate Professor, Department of Mining & Mineral Resource Engineering.
Dr. Carl Spezia; Associate Professor & EET Coordinator, Department of Engineering Technology.

OBJECTIVES

This course has the following objectives that are aimed at enhancing your success as a student at SIUC and its College of Engineering:

1. Students will begin to develop a broad, comprehensive perspective on higher education.
2. Students will contribute to and help maintain a safe, supportive and positive university learning experience for themselves and their academic peers.
3. Students will understand and begin to practice basic communication skills appropriate to the University setting.
4. Students will begin the process of understanding critical thinking in the university context.
5. Students will understand and apply information technology in support of their academic work.
6. Students should begin to develop knowledge of their own abilities, skills, and life demands so that they can develop these more effectively in pursuit of their academic goals.
7. Students should begin to develop an understanding of career opportunities available to them and the professional responsibility associated with that career.
8. Students will become information literate, using critical thinking and problem solving skills to build an intellectual framework for discovering, using and evaluating information.
9. Students will demonstrate an understanding of inquiry and/or creative processes from disciplinary and/or interdisciplinary perspectives specific to their College.
10. Through hands-on laboratory projects and additional activities, students will be able to appreciate the role and importance of math and science in engineering.

RESOURCES

Recommended Text: Stephan, Bowman, Park, Sill, and Ohland, *Introduction to Engineering - Southern Illinois University*, Pearson Custom Library, New York, 2012 (ISBN 1256579076)

Desire2Learn: Go to: online.siu.edu

College Website: <http://www.engr.siu.edu>

GRADING CRITERIA

Homework/Lab Assignments	25%
Lab Reports	25%
Midterm Exam - Fri, Oct 5, 2013	25%
Final Exam – Fri, Dec 13, 2013, 10:10 a.m.	25%

HOMEWORK / LAB ASSIGNMENTS

The due date for homework will be specified when the assignment is given. All assignments must be submitted in the classroom, not in instructors' mailboxes, and are due at the beginning of class. Late homework will not be accepted. Homework submitted for a grade must be neat and completed on 8.5" by 11" paper. Engineering quadrille paper is preferred. At the top of the first page, list your name, group number, the course number, assignment number, and the date submitted. Homework grades will at times be based upon your demonstration of problem solving skills, and in other cases, simply whether you have diligently attempted each problem.

LAB REPORTS

Laboratory reports will definitely be assigned with the laboratory projects associated with the Mechanical, and Electrical and Computer Engineering projects and likely also with some of the other projects. The text of the laboratory reports will be typed and follow the format given for that laboratory project.

EXAMS

There will be 2 exams: a midterm and final exam. The midterm exam will cover the material presented in large group lectures before the midterm exam while the final exam will focus on the laboratory projects now that all students have completed all projects and the small number of large group lectures held after the midterm exam. There will be no make-up exams.

ASSIGNMENT OF GRADES

The following grading scale will be strictly adhered to throughout the semester:

<i>GRADE</i>	<i>SCORE</i>
A	90% – 100%
B	80% – 89%
C	70% – 79%
D	60% – 69%
F	< 60%

ATTENDANCE

Attendance will be recorded, and you are expected to attend all lectures and lab sessions. However, if you find it necessary to be absent, there is no distinction between excused and unexcused absences, and the following policy will apply: (1) for 1 through 3 absences, no penalty will be incurred; (2) for 4 through 10 absences, a student's overall grade will be reduced by 3% for each missed class/lab session; (3) if a student has more than 10 absences, she/he will NOT pass the course.

EXPECTATIONS

The class has the responsibility to maintain an atmosphere in which no person is impeded from learning. Turn off electronic devices in class that could be distracting such as cell phones. If you wish to take notes with your tablet computer, please do so but do not distract others and keep the computer focused on the material in the class. The tablet computer will be used to collect attendance and obtain students feedback through interactive surveys. As indicated, attendance at all lecture and lab sessions is required. Be prompt for all classes, labs and appointments; arriving more than 5 minutes after class begins will be considered an absence. Furthermore, active class participation and group discussions will make our time together more enjoyable and successful.

OFFICE HOURS AND ELECTRONIC MAIL

We encourage you to seek assistance and advisement when you have trouble understanding course concepts or homework problems. The recommended method for contacting the teaching assistant or instructor is during office hours. As an alternative, use e-mail to instructors for short questions, to arrange an appointment, or to suggest a need for clarification of assignments. If our doors are open and we are available for discussion, you are welcome to come in.

Please be prepared with specific questions when you come to an office hour or appointment. You should provide evidence that you have worked on the problem or topic to which your question pertains.

ACADEMIC INTEGRITY

Academic integrity involves a student's obligation to act with honesty and to respect the rights of other in carrying out all academic assignments, including regularly assigned homework and laboratory reports. Students are expected to exhibit this quality at all times. The University policy concerning academic dishonesty will be strictly adhered to in both the laboratory and lecture components of this course. Violations of this policy include

- Plagiarism or representing the work of another as one's own work
- Preparing work for another that is to be used as that person's own work
- Cheating by any method or means
- Knowingly falsifying or manufacturing scientific or educational data and representing the same to be the result of scientific or scholarly research
- Knowingly furnishing false information to a university official relative to academic matters
- Soliciting, aiding, abetting, concealing, or attempting conduct in violation of this policy

Any violation of the policy will result in immediate failure of this course, conduct board penalties, or both. If you have any questions about whether a particular behavior is in violation of the University's policy, you should ask before proceeding.

EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT's website at www.bert.siu.edu, Department of Safety's website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in distress. By working closely with faculty, staff, students and their families, SIUC will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community.

Saluki Cares is an early alert initiative composed of professionals from different areas of campus life who deal with students on a regular basis: Academic Support, Academic Affairs/Faculty, Enrollment Management, Student Life & Intercultural Relations, New Student Programs, and others. All concerns remain confidential.

Referrals are made from faculty, staff, parents, other students, or by the student him/herself. The Saluki Cares team can help students with issues surrounding, but not limited, to deaths (student/family); extended illnesses; financial stress; adjustment issues; class attendance problems; homesickness; and other general signs of stress

If you need assistance by Saluki Cares please contact them at 618-453-5714 or siucares@siu.edu

DISABILITY SUPPORT SERVICES

Disability Support Services (DSS) provides federally mandated academic and programmatic support services to student with permanent and temporary disabilities. Disability services are located throughout the University in integrated settings. DSS provides centralized coordination and referral services.

If you need to contact DSS please do so at 618-453-5738 or dsssiu@siu.edu

STUDENT EMAIL POLICY

Email is a mechanism for official communication within Southern Illinois University Carbondale. The University has the right to expect that such communications will be received and read in a timely fashion. Official email communications are intended only to meet the academic and administrative needs of the campus community.

The instructors will also post scores and announcements on the Desire2Learn website for the course.

INDUSTRIAL MENTORS

The following are designated industrial mentors that are available to assist you in your academic career. These are individuals that have agreed to respond to your questions, provide guest lectures, and offer academic and career advice. Simply use the contact information provided!

Last	First	TITLE & COMPANY	ADDRESS	E-MAIL ADDRESS	TELEPHONE NO.
Abba	Michael	General Supervisor, Admin & Business Services AmerenCIPS	1800 W. Main Marion, IL	mabba@ameren.com	618-993-4633
Blake	Rod	Segate Technology Manager	1280 Disc Dr. Shakopee, MN	rodnev.d.blake@seagate.com	952-402-2529
Chan	Ting Pong (Jack)	Water Resources Engineer Land Resource Management Group (LRMG)	525 E. North St., Suite F Bradley, IL	ichan@lrmg.net	815-928-8990, x228
Clendenin	Ralph	Mfg. Engineering Manager Spartan Light Metal Products	510 E. McClurken Avenue Sparta, IL	Rclendenin@spartanlmp.com	618-443-4452, x1219
Edwards	Glenn	Aisin Manufacutre	11000 Redco Dr., Marion, IL	g-edwards@aisinil.com	
Eberhart	Gina	Engineer AmerenIP	1050 West Blvd. Belleville, IL	GEBERHART@ameren.com	618-234-6276 or 618-443-2636
Gaines	Sue	NASA	TA-F, Kennedy Space Center, FL 32899	Sue.R.Gaines@nasa.gov	(321)867-8497
Hinchee	Beth	Engineering Recruiting Manager Caterpillar, Inc	MOS9 PO Box 600 Mossville, IL	hinchee_beth_a@cat.com	309-578-8726
Hooks	Dean	Principal Manager Boeing	100 Airport Way, MC S1003245 St. Louis, MO	dean.c.hooks@boeing.com	(314) 232-2398
Hoyson	Chris	Vice President The Whiting-Turner Contracting Company		Chris.Hoyson@Whiting-Turner.com	410.859.8610
Johnson	Michael R.	Mgr. Process Control United States Steel (USS) Granite City Works	20th & State Street Granite City, IL	MRJohnson@uss.com	618-451-3456
Lomax	Ozzie	Ameren UE Meramec Plant	8200 Fine Road St. Louis, MO	olomax@ameren.com	314-992-7201
Lo	Howard	Founder Mastersoft Inc.	440 W. Torrey Pines Way Vernon Hills, IL	hlo@visitview.com	650-400-3210
Parry	Travis M.	Water Resources Department Christopher B. Burke Engineering, Ltd.	9575 W. Higgins Road Rosemont, IL	tparry@cbbel.com	847-823-0500
Porier	Jim	Product Development Engineer Caterpillar, Inc	AB3465 100 N.E. Adams Street, Peoria, IL	cndnrnk@yahoo.com	309-494-1568
Reitz	Paul H.	Principal, Reitz & Jens, Inc.	1055 Corporate Square Dr., St. Louis	preitz@reitzjens.com	314-993-4132,x224
Riter	Bruce	Attorney At Law Law Office of Bruce D. Riter	101 1st St. Los Altos Hills, CA	bruce@riter.net	
Robinson	Debbi Cecil	Human Resources Manager Delta Companies, Inc.	114 S. Silver Springs Rd. Cape Girardeau, MO	drobinson@deltacos.com	573-334-5261
Solverson	Matt	General Dynamics	8820 Route 148, PO Box 278, Marion	MSolverson@MAR.GD-OTS.COM	
Wade	Chuck	IBM	650 Harry Road, San Jose, CA	cwade@almaden.ibm.com	408-927-1650
Wells	Brian	Mgr. Product Support Operations John Deere		WellsBrianA@JohnDeer.com	309-765-1993
White	David	Cadence		dwhite@cadence.com	408-260-7561
Howard	Wilson	Intel	5200 N.E. Elam Young PKWY MS EY2-07 Hillsboro, OR	howard.wilson@intel.com	503-696-3959
Rathish	Jayabharathi	Intel Sr. Staff CAD Engr.	1900 Prairie City Road Folsom, CA	rathish.Jayabharathi@intel.com	916-356-1638
Sanders	Bert	eServ	8200 N. Allen Road, Peoria, IL	Bert.Sanders@ps.net	(309) 740-7565
Puzey	Michelle	John Deere Seeding Group		PuzeyMichelleC@JohnDeere.com	(309) 765-7264
DeRuntz	Stephanie	DePuy Orthopaedics	700 Orthopaedic Dr., Warsaw, IN 46581	sderuntz@its.jnj.com	574-372-7284
Feathers	Tim	CDM Federal Programs	1050 North Reed Station Road, Suite D Carbondale, IL 62902	FeatherTD@cdm.com	618.351.4530
Kelsey	Kelly	Jacob's Engineering	One Financial Plaza 501 N. Broadway St. Louis, Missouri 63102-2121	kelly.kelsy@jacobs.com	314-335-4000
Grant	Mullin	Boeing Defense, Space & Security: Propulsion Engineering	St. Louis, Mo	Grant.Mullen@boeing.com	(314)-233-4720
Haley	Boswell	ATS, Advaced Technology Services	Peoria, IL	hboswell@advancedtech.com	309.693.6312
Traci	Abney	Recent Grad	St. Louis, MO	traciabney@sbcglobal.net	

STUDENT GROUPS

The class will be divided into 4 groups for the laboratory portion of this course. You can determine your group from the following list, which are alphabetical by first name. If your name is not on the list, please see Dr. Mathias to be added to a group.

<u>Group 1 (A-Brock G.)</u>	
1	Adam N. Clay
2	Alejandro A. Maldonado
3	Alexander X. Deaver
4	Alexander M. Goldstein
5	Alexander J. Nebijinates
6	Alexander J. Stowers
7	Alice E. Waldon
8	Allison A. Campbell
9	Ambreeann L. Gilbert
10	Andrew P. Payne
11	Antonio N. Pugh
12	Austin Olsen
13	Austin P. Peterson
14	Benjamin R. Butcher
15	Benjamin D. Joles
16	Benjamin L. Kuchenmeister
17	Benjamin T. Zahler
18	Blake J. Livingston
19	Braden N. Hull
20	Bradley K. Jones
21	Brady K. Bunton
22	Brendan P. Keller
23	Brian R. DeLarche
24	Brian D. Varvel
25	Brock K. Grueter

<u>Group 3 (Kendall - Nicolas)</u>	
1	Kendall R. Candler
2	Kevin M. Pfister
3	Kyle M. Humphrey
4	Kyle R. Ozier
5	Lauren J. Stockton
6	Luke R. Delia
7	Mark W. Allen
8	Marwan A. Aljarboa
9	Mason M. Steffens
10	Mason T. Wagner
11	Matthew R. Dempsey
12	Matthew H. Merdian
13	Matthew J. Peters
14	Matthew B. Schmidlin
15	Maxwell C. Hopkins
16	Megan M. Brown
17	Melissa A. Heatherly
18	Melissa S. Milstead
19	Michael R. Cawall
20	Michael B. Kobitter
21	Michael S. Koshley
22	Michael M. Tierney
23	Michaela M. Lydon
24	Nathan S. Huang
25	Nicolas J. Woolard

<u>Group 2 (Brock S. - Ken)</u>	
Brock M. Stigall	
Carson J. Schumacher	
Collin A. Ashton	
Daniel J. McManus	
Darien M. Edwards	
David J. Cortese	
David R. Kopera	
Emily M. Suttles	
Garrett Gutstadt	
Henry T. Weck	
Holden A. Huisinga	
Isaac J. Taylor	
Jacob R. Brown	
Jacob M. Churchill	
Jacob D. Heitzig	
Jacob D. Nelson	
Jamie E. Stirling	
Jared D. Dillman	
Jared A. Linze	
John A. Bellafiore	
John S. Garrahy	
Jordan S. Smith	
Kaine M. Stewart	
Kaleb J. McMahon	
Ken Nakazawa	

<u>Group 4 (Nicole - Zenon)</u>	
Nicole D. Hanke	
Oscar G. Ortega	
Patrick R. Martin	
Paul A. Lopez-Sangurima	
Philip M. Kains	
Reece D. Kurre	
Robert Nelson	
Robert G. Reynolds	
Ryan C. Ball	
Samuel J. Wagner	
Scott A. Pautler	
Seth M. Griffin	
Spencer H. Daigle	
Stephanie M. Venis	
Stephany H. Wallace	
Stephen J. Kaatz	
Steven E. Smith	
Taylor E. Burell	
Theodore Gammell	
Thomas Hadwiger	
Timothy J. Jacobs	
Tyler G. Martin	
Veronica L. Kleber	
William V. Tipton	
Zenon J. Hill	

**UCOL 101E
Tentative Schedule - Fall 2013**

		Date	Topic	Instructor	GR1	GR2	GR3	GR4
1		M 19-Aug	Introduction	JM-JW	A111	A111	A111	A111
2	W1	W 21-Aug	Intro to CEE	SK	A111	A111	A111	A111
3		F 23-Aug	Intro to ECE	LG	A111	A111	A111	A111
4		M 26-Aug	Intro to MEEP	JM	A111	A111	A111	A111
5	W2	W 28-Aug	Academic life	JM	A111	A111	A111	A111
6		F 30-Aug	Intro to Technology	CS	A111	A111	A111	A111
		M 2-Sep	LABOR DAY					
7	W3	W 4-Sep	Intro to Mining	SS	A111	A111	A111	A111
8		F 6-Sep	Projects	LG-JM	A131	A131	A111	A111
9		M 9-Sep	Projects	LG-JM	A209	A221	E230	E237
10	W4	W 11-Sep	Projects	LG-JM	A221	A209	E230	E237
11		F 13-Sep	Projects	LG-JM	A209	A221	E230	E237
12		M 16-Sep	Projects	LG-JM	A221	A209	E230	E237
13	W5	W 18-Sep	Projects	LG-JM	A209	A221	E230	E237
14		F 20-Sep	Projects	LG-JM	A221	A209	E230	E237
15		M 23-Sep	Projects	LG-JM	A209	A221	A111	A111
16	W6	W 25-Sep	Projects	LG-JW-JM	A221	A209	A111	A111
17		F 27-Sep	Unit Conversions	JM	A111	A111	A111	A111
18		M 30-Sep	Writing Center & Tutoring		A111	A111	A111	A111
19	W7	W 2-Oct	MIDTERM					
20		F 4-Oct	Guest 1		A111	A111	A111	A111
		M 7-Oct	Projects	CS	A111	A111	A111	A111
21	W8	W 9-Oct	Projects	CS	A111	A111	A111	A111
22		F 11-Oct	Projects	CS	A111	A111	A111	A111
23		M 14-Oct	FALL BREAK					
24	W9	W 16-Oct	Projects	SS	A111	A111	A111	A111
25		F 18-Oct	Projects	SS	A111	A111	A111	A111
26		M 21-Oct	Projects	SS	A111	A111	A111	A111
27	W10	W 23-Oct	Projects	SK	A111	A111	A111	A111
28		F 25-Oct	Projects	SK	A111	A111	A111	A111
29		M 28-Oct	Projects	SK	A111	A111	A111	A111
30	W11	W 30-Oct	Healthy Decisions - Wellness Center		A111	A111	A111	A111
31		F 1-Nov	Registered Student Orgs	LG-JM	A111	A111	A111	A111
32		M 4-Nov	Projects	LG-JM	A111	A111	A131	A131
33	W12	W 6-Nov	Projects	LG-JM	E230	E237	A209	A221
34		F 8-Nov	Projects	LG-JM	E230	E237	A221	A209
35		M 11-Nov	VETERANS DAY HOLIDAY					
36	W13	W 13-Nov	Projects	LG-JM	E230	E237	A209	A221
37		F 15-Nov	Projects	LG-JM	E230	E237	A221	A209
38	W14	M 18-Nov	Projects	LG-JM	E230	E237	A209	A221
		W 20-Nov	Projects	LG-JM	E230	E237	A221	A209
		F 22-Nov	Projects	LG-JM	A111	A111	A209	A221
39		M 25-Nov	Projects	LG-JW-JM	A111	A111	A221	A209
40	W15	W 27-Nov	THANSGIVING BREAK					
41		F 29-Nov						
42		M 2-Dec	Guest 2		A111	A111	A111	A111
43	W16	W 4-Dec	Internships/Resumes	LG-JM	A111	A111	A111	A111
44		F 6-Dec	Conclusion	JM-JW	A111	A111	A111	A111
W17		F 13-Dec	FINAL EXAM: 10:10 a.m. - 12:10 p.m. in A-111					

**JM: James Mathias; LG: Lalit Gupta; JW: John Warwick; SK: Sanjeev Kumar; SS: Sam Spearing
CS: Carl Spezia**