


<b>CHEM 1111 General Chemistry I Laboratory</b>		
	<b>Professors</b>	<b>Sections</b>
	Sandhya Gavva, Ph.D	101, 104, 107, 118, 121, 124, 130, 137, 139
	Yu Huang	102, 108, 111, 119, 122, 128, 134, 136, 138, 141
	Shailseh Shah, Ph.D	110, 116, 123, 142, 143
	Amandeep Sra, Ph.D	105, 127
	Yanping Qin, Ph.D	109, 114, 115, 117, 125, 132, 133, 135
	Katie Walker, Ph.D	103, 106, 112, 113, 120, 126, 129, 131, 140
<b>Term</b>	<b>Fall 2016</b>	
<b>Meetings</b>	Workshops: SLC 1.204, 2.202, 2.203, 2.303, 3.102 and CB 1.104 Labs: SLC 3.202, 3.210 & 3.220	

### Professors' Contact Information

	<b>Phone</b>	<b>Office</b>	<b>Email Address</b>	<b>Office Hours</b>
Dr. Gavva	972-883-2279	SLC 3.501	sgavva@utdallas.edu	W 3:30-4:30 pm F 10-11 am
Mr. Huang	972-883-4817	BE 3.330B	yxxh091220@utdallas.edu	W 1-3 pm
Dr. Shah	972-883-4817	BE 3.330B	sns170230@utdallas.edu	W 1-2 pm
Dr. Sra	972-883-4818	SLC 3.513	amandeep.sra@utdallas.edu	M/W/F 1-2 pm
Dr. Qin	972-883-6299	SLC 3.403	yxxq083000@utdallas.edu	T 9-10 am
Dr. Walker	972-883-4817	BE 3.330B	erink.walker@utdallas.edu	M 3-4 pm R 10-11 am

### General Course Information

<b>Pre-requisites, Co-requisites, &amp; other restrictions</b>	One year of High School Chemistry. No Audits allowed.
<b>Course Description</b>	These courses reinforce the concepts of Freshman Chemistry in the lab via experiments. Students are offered the opportunity to acquire basic laboratory skills and an appreciation for the presence of chemistry in daily living. The experiments are designed to demonstrate concepts including properties of inorganic substances, principles of structure and bonding, and elementary quantitative analysis.
<b>Expected Learning Outcomes</b>	<i>Students should be able to:</i> <ol style="list-style-type: none"> <li>1. Explain the importance of Lab Safety</li> <li>2. Collect and organize data in written laboratory reports</li> <li>3. Measure mass and volume of chemicals</li> <li>4. Perform stoichiometric reactions</li> <li>5. Learn the technique of titration</li> </ol>

<b>Required Texts &amp; Materials</b>	<p>An Atoms First Approach to the General Chemistry Laboratory, 2<sup>nd</sup> edition  ISBN : 9780077646424 (Two-semester)  9781308162027 (One Semester)</p> <p>Z-87 rated Safety Glasses or Goggles</p> <p>Only three types of <b>calculators</b> are allowed during labs and workshops.  TI – 30 Xa, TI-30 XIIS and TI-30 XIIB</p> <ul style="list-style-type: none"> <li>Access to eLearning is needed to complete your safety and Pre-lab quizzes</li> </ul>
<b>Supplemental Texts, Readings, &amp; Materials</b>	<ul style="list-style-type: none"> <li>Students are financially responsible for items checked out such as glassware and instruments</li> <li>Other course materials may be recommended or required</li> <li>Tutors: See the Chem. Dept. Office (BE 2.312) for an updated list of tutors (your instructor can guide you)</li> <li>Interactive DVD-ROMs covering general chemistry are available via the CSA</li> </ul>
<b>Class Attendance</b>	<p><i>It is typical for the enrollments of all CHEM 1111 sections to be at a maximum (set by the Fire Marshall's regulations for the SLC laboratories). If you are enrolled in one Section, you <b>cannot</b> attend another Section.</i></p> <p><i>It is typical for the laboratory activities to utilize the entire 180 minutes of class time such that one <b>cannot</b> simultaneously enroll in other classes whose meeting days and times conflict with those of CHEM 1111.</i></p> <p><b>No cell phones or computers are allowed in the chemistry laboratories. If you need to make an emergency phone call, please step outside.</b></p>
<b>Make-Up Labs</b>	<p><b>There are no make-up lab dates for any experiments!</b> There are no scheduled make-up periods in the Gen Chem Labs. Make-ups are done during other lab sections on a space-available basis. If you miss your regularly scheduled laboratory session, and have a valid university excuse, you can make arrangements through <b><u>your Instructor</u></b> to make-up the lab later in the <b><u>same week</u></b> (Tuesday to Monday). This will be your <b><u>only chance</u></b> to make-up that particular experiment. Make-ups for any lab are not possible outside this given time frame.</p> <p><b>To make-up a laboratory with <u>another instructor</u>, you must fill out the make-up lab form and turn in to the <u>lab coordinator</u></b> (Dr. Sra in SLC 3.513). The make-up lab form is posted on elearning. You will receive an email from the lab coordinator confirming your assignment to another lab section.</p> <p>Forms should be turned in as soon as possible. For students participating in UTD sports activities (the complete schedule must be attached and signed by responsible coach or team leader) and religious holidays the form should be submitted <b><u>at least 2 weeks prior to the event</u></b>. In case of medical absence attach a doctor's note.</p>

## Teaching Assistants and Lab Sections

Day/Time	Section	Instructor	Teaching Assistant	E-mail
<b>M 7:00AM</b>	<b>101</b>	<b>Dr. Gavva</b>	Kallu, Jyothi	jxk162030@utdallas.edu
	<b>102</b>	<b>Mr. Huang</b>	Berry, Danielle	drb160230@utdallas.edu
	<b>103</b>	<b>Dr. Walker</b>	Calabaquib, Erika	elc160430@utdallas.edu
<b>M 10:00 AM</b>	<b>104</b>	<b>Dr. Gavva</b>	Calabaquib, Erika	elc160430@utdallas.edu
	<b>105</b>	<b>Dr. Sra</b>	Kallu, Jyothi	jxk162030@utdallas.edu
	<b>106</b>	<b>Dr. Walker</b>	Berry, Danielle	drb160230@utdallas.edu
<b>M 1:00 PM</b>	<b>107</b>	<b>Dr. Gavva</b>	Coffer, Meagan	mac151630@utdallas.edu
	<b>108</b>	<b>Mr. Huang</b>	Abeyrathna, Sameera	ssa161030@utdallas.edu
	<b>109</b>	<b>Dr. Qin</b>	Cue, John	joc160230@utdallas.edu
<b>M 4:00 PM</b>	<b>110</b>	<b>Dr. Shah</b>	Cue, John	joc160230@utdallas.edu
	<b>111</b>	<b>Mr. Huang</b>	Coffer, Meagan	mac151630@utdallas.edu
	<b>112</b>	<b>Dr. Walker</b>	Abeyrathna, Sameera	ssa161030@utdallas.edu
<b>M 7:00 PM</b>	<b>142</b>	<b>Dr. Shah</b>	Nguyen, Do Duc	dxn111130@utdallas.edu
<b>T 7:00AM</b>	<b>113</b>	<b>Dr. Walker</b>	Martinez, Patricia	pxm125730@utdallas.edu
<b>T 10:00AM</b>	<b>114</b>	<b>Dr. Qin</b>	Martinez, Patricia	pxm125730@utdallas.edu
<b>T 1:00PM</b>	<b>115</b>	<b>Dr. Qin</b>	Paliaththa Kumarage, Dileepa	pxd150930@utdallas.edu
	<b>116</b>	<b>Dr. Shah</b>	Nguyen, Do Duc	dxn111130@utdallas.edu
<b>T 4:00 PM</b>	<b>117</b>	<b>Dr. Qin</b>	Welch, Raymond	rpw031000@utdallas.edu
<b>W 7:00AM</b>	<b>118</b>	<b>Dr. Gavva</b>	Dickens, Angela	add130130@utdallas.edu
	<b>119</b>	<b>Mr. Huang</b>	Malekpour, Soheil	sxm165830@utdallas.edu
	<b>120</b>	<b>Dr. Walker</b>	Tutol, Jasmine	jnt160330@utdallas.edu
<b>W 10:00 AM</b>	<b>121</b>	<b>Dr. Gavva</b>	Malekpour, Soheil	sxm165830@utdallas.edu
	<b>122</b>	<b>Mr. Huang</b>	Dickens, Angela	add130130@utdallas.edu
	<b>123</b>	<b>Dr. Shah</b>	Tutol, Jasmine	jnt160330@utdallas.edu
<b>W 1:00 PM</b>	<b>124</b>	<b>Dr. Gavva</b>	Mowery-Batnij, Sharif (Alex)	sam160830@utdallas.edu
	<b>125</b>	<b>Dr. Qin</b>	Ranathunga, Dineli	dxr161130@utdallas.edu
	<b>126</b>	<b>Dr. Walker</b>	Tegaboue, Augustin	axt127230@utdallas.edu
<b>W 4:00 PM</b>	<b>127</b>	<b>Dr. Sra</b>	Tegaboue, Augustin	axt127230@utdallas.edu
	<b>128</b>	<b>Mr. Huang</b>	Mowery-Batnij, Sharif (Alex)	sam160830@utdallas.edu
	<b>129</b>	<b>Dr. Walker</b>	Ranathunga, Dineli	dxr161130@utdallas.edu
<b>R 7:00AM</b>	<b>130</b>	<b>Dr. Gavva</b>	Gorby, Amanda	ajg150830@utdallas.edu
	<b>131</b>	<b>Dr. Walker</b>	Youn, Jonghae	jxy140930@utdallas.edu
<b>R 10:00 AM</b>	<b>132</b>	<b>Dr. Qin</b>	Youn, Jonghae	jxy140930@utdallas.edu
<b>R 1:00 PM</b>	<b>133</b>	<b>Dr. Qin</b>	Paliaththa Kumarage, Dileepa	pxd150930@utdallas.edu
	<b>134</b>	<b>Mr. Huang</b>	Martin, Thomas	tjm150230@utdallas.edu
<b>R 4:00 PM</b>	<b>135</b>	<b>Dr. Qin</b>	Welch, Raymond	rpw031000@utdallas.edu
	<b>140</b>	<b>Dr. Walker</b>	Panangala Samitha	sdp140230@utdallas.edu
	<b>141</b>	<b>Mr. Huang</b>	Martin, Thomas	tjm150230@utdallas.edu
<b>F 7:00 AM</b>	<b>136</b>	<b>Mr. Huang</b>	Gorby, Amanda	ajg150830@utdallas.edu
	<b>137</b>	<b>Dr. Gavva</b>	Zhou, Qinhan	qxz160530@utdallas.edu
<b>F 10:00 AM</b>	<b>143</b>	<b>Dr. Shah</b>	Wang, Zhong	zxw161030@utdallas.edu
<b>F 1:00 PM</b>	<b>138</b>	<b>Mr. Huang</b>	Zhou, Qinhan	qxz160530@utdallas.edu
	<b>139</b>	<b>Dr. Gavva</b>	Wang, Zhong	zxw161030@utdallas.edu

The easiest way to contact an instructor and/or TA is via e-mail.

Every instructor and TA will check their e-mail frequently and they try to respond as fast as possible.

Please always include both – your TA and your instructor – in your e-mail. Emails should include your section number, day and time your lab meets.

## Assignments & Academic Calendar- CHEM 1111

There will be twelve lab experiments during the semester. There will be no makeup labs and you are not allowed to perform your experiments in another Lab section.

Your final grade for the lab will be determined after dropping the lowest lab score (experiments # 1-12).

Experiment 14 is a capstone experiment and cannot be dropped.

This schedule and timeline are subject to change at the discretion of the lab coordinator.

Week of:	Exp. #	Experiment	Pre-Lab No.	Report Due Week of
8/29 – 9/02/2016		Syllabus/Check-in/Lab Safety		Lab safety quiz on elearning 9/06
9/06 – 9/12/2016	1	Basic Laboratory Operations	1	09/13
9/13 – 9/19/2016	3	Properties of Light	3	09/20
9/20 – 9/26/2016	4	Atomic Structure	4	09/27
9/27– 10/3/2016	2	Copper Cycle	2	10/04
10/04 – 10/10/2016	5	Periodic Trends	5	10/11
10/11 – 10/17/2016	6	Molecular Geometry and Polarity	6	10/18
10/18 – 10/24/2016	7	Percent Composition	7	10/25
10/25 – 10/31/2016	8	Limiting Reagent	8	11/01
11/01 – 11/07/2016	9	Qualitative Analysis	9	11/08
11/08 – 11/14/2016	10	Titration I	10	11/15
11/15 – 11/28/2016	12	Calorimetry	12	11/29
11/21 – 11/25/2016		<b>Fall Break</b>		
11/29 – 12/5/2016	14	Capstone: Airbag Lab & Check out Experiment 14 cannot be dropped	14 - Research	11/29

**Nov 21<sup>th</sup> (Monday) is fall break and student needs to do CALORIMETRY experiment on Nov 28<sup>th</sup> (Monday). Everyone must checkout during the week of November 29<sup>th</sup>, 2016. Failure to checkout will result in withholding of grade.**

### Course Policies

Safety	<p><b>IMPORTANT:</b> In accordance with University and Chemistry Department safety rules, any time anyone (student, TA, instructor, or visitor) is in a lab, Z87-rated safety eyewear must be worn. <u>The first violation</u> in the semester will result in a warning and removal from the lab until the safety eyewear is in-place. <u>The second violation</u> in the semester will result in dismissal from that lab period with no extra time being allowed for make-up of the work scheduled for that lab period. Similar penalties will apply if any other safety rules are violated. <b>Please see “penalty points” for details.</b> In summary, all students are responsible for all information inside the undergraduate safety manual; it is located at:</p> <p style="text-align: center;"><a href="http://www.utdallas.edu/nsm/chemistry/resources/safety.html">www.utdallas.edu/nsm/chemistry/resources/safety.html</a></p> <p>In addition arms, legs and feet should be covered in lab. Short pants and skirts (which expose calves or thighs) are not allowed. Sleeveless shirts (including spaghetti strap shirts), or shirts that expose your midriff are also not allowed—however, a lab coat may be worn over these shirts during lab. <b>Closed-toed shoes that fully cover your foot are also required.</b> Hair longer than shoulder length must be tied in an appropriate manner to keep it out of harm’s way.</p>
Safety Quiz	<p>Login to the elearning lab course.  Read the syllabus and the three safety documents in the safety folder.  A safety quiz will pop-up ONLY after you have reviewed the safety documents.  Begin the safety quiz.  You have multiple attempts to obtain a 100% on the safety quiz.  The pre lab quizzes will NOT open up until you complete and obtain 100% on the safety quiz.</p>
Pre-lab	<p><b><u>Each week students are expected to prepare for the lab by:</u></b></p> <p>A. Reading and understanding the experiment  B. Answering about <b>5-6 questions on eLearning</b> for that particular lab. You will be given 30 minutes to answer the questions. It is absolutely imperative that you have read and UNDERSTOOD the lab prior to beginning the pre-lab quiz.</p> <p>The pre-lab quiz questions will be displayed one at a time, and you will not be permitted to go back, once you have submitted an answer.  Students are expected to take the pre-lab quiz on their own, without help from anyone or the internet. However, students are permitted to use their lab manuals or textbook during the pre-lab quiz.</p> <p><b><i>Pre-labs will be due at midnight the evening before you perform the experiment. Students who do not complete the pre-lab quiz and/or receive a score of zero will not be permitted in the workshop and the lab for that day. No make-up lab will be allowed.</i></b></p>
Workshops	<p>Students will work in groups during the first 45 min of the lab period. Workshops are <i>open discussions</i> designed to help you understand the concepts and techniques involved in each experiment. The goal here is to make the lab experience more enjoyable by assisting students to reach a basic, overall understanding of the experiment and the science. It is advised to read and gain an initial understanding the lab <u>prior to</u> the lab period in order to be better prepared for both the <u>Workshops</u> and the <u>Experiments</u>. Student work in the workshop will be collected at the end of the workshop period. Workshops count for 10% of the course grade.</p>
Lab Etiquette	<p>Each student will be evaluated with respect to their adherence to good safety practices, advanced knowledge of the day’s experiment and the equipment involved, laboratory technical skills, and laboratory etiquette/professionalism. If you do not attend lab, you cannot earn Lab Readiness Points.</p> <ul style="list-style-type: none"> <li>• Students who miss more than three experiments FOR ANY REASON are advised to withdraw from the course.</li> <li>• <b>All members of the group must be present during the entire experiment.</b> Any member that leaves early or takes long breaks during the experiment will receive a grade of zero for that experiment.</li> <li>• No experiments can be made up</li> </ul>

	<ul style="list-style-type: none"> <li>No section switching is allowed</li> </ul>
<b>Lab Write-Ups</b>	<p>There are no formal lab reports required for this course. However, you will turn in the data sheets with all the required information for each experiment. Where appropriate, it is essential that you include calculations, detailed observations, balanced equations, percentage error, a brief conclusion of the experiment, etc. Write-ups are due at the <u>beginning</u> of the next lab period. For example, if an experiment is performed between 10:00 – 12:45 PM on Tuesday, September 06, 2016, the write-up for that exp. will be due at 10:00 AM next Tuesday, September, 13, 2016. Lab reports submitted later on the same day will receive a 5 point deduction. Any further LATE lab reports will be accepted but will receive a 10 point deduction <b>EACH DAY</b> it is late. Any student found working on the lab report during workshop will automatically receive a 20 point deduction – 10 points for lab report being turned in late and 10 points for lack of participation in the workshop.</p>
<b>Data</b>	<p>Any data you collected during the experiment must be written in pen. In case of wrong entries, make a new table and explain what happened. Do not erase any original data. Use scientific notations to improve accuracy. 0.000789 does not equal to 0.0008, it's <math>7.89 \times 10^{-4}</math>. Calculating this way might improve % error. Keep all the data and calculations neat. If we can't read them, obviously we cannot grade them. Before you leave the lab, the TA must review and sign your data sheet.</p>
<b>Clean-Up</b>	<p>Leave sufficient time at the end of laboratory period for cleaning up. Make sure you thoroughly clean all the equipment, glassware and also clean-up your bench. If you do not comply with cleanup and other general rules pertaining to the lab, your grade for that lab will be lowered. <b>Please see “penalty points” for detail.</b></p>
<b>Penalty Points</b>	<p>Points can be deducted from your final grade to each experiment for any of the following reasons:</p> <ul style="list-style-type: none"> <li>Lack of participation in the workshop and/or the laboratory (absent* or inattentive) <b>5 – 50 points</b></li> <li>Late lab report <b>10 points per day late</b></li> <li>Late lab report (same day late submission) <b>5 points</b></li> <li>Safety violations (see posted notes for details) <b>5 – 50 points</b></li> <li>Illegible handwriting or computer generated work (unless otherwise arranged) <b>5 – 10 points</b></li> <li>Calculations that are not complete or cannot be followed <b>5 – 15 points</b></li> <li>Misuse of laboratory time (e.g. using cell phone) <b>5 – 10 points</b></li> <li>Failure to clean up equipment, glassware, working area, community equipment (e.g. balance) <b>5 – 10 points</b></li> <li><b>After a 10 minute grace period, students will not be allowed to attend the workshop and the lab. At the discretion of the instructor, under extenuating circumstances, the student may be allowed to participate in the lab but all points for the workshop will be deducted.</b></li> <li>Any student who does not complete the pre-lab quiz <b><i>will not</i></b> be permitted to perform that day's experiment. Therefore, students should read and understand the lab BEFORE they attempt the pre-lab quiz.</li> </ul>

<b>Chemistry Stockroom SLC 3.221</b>	Broken items will need to be replaced by filling out a breakage form with the appropriate information. The TA will assist in filling the breakage form and submitting it to the Chemistry stockroom manager along with a copy of your comet card. Broken charges are summed and entered into your account at the end of the semester. You are also required to go to the Bursars office and pay for any items in your lab drawer that become broken or lost during the SEMESTER. <b>THIS WILL BE STRICTLY ENFORCED.</b> Failure to reconcile your account with the Bursar office will result in withholding of your CHEM 1111 grade.																																						
<b>Lab Drawers</b>	Failure to check-out of your laboratory drawer before Finals Week will result in withholding of your CHEM 1111 Grade.																																						
<b>Special Assignments</b>	None																																						
<b>Extra Credit</b>	None																																						
<b>Grading (credit) Criteria</b>	<p><b>Summary of Points:</b></p> <table><tr><td><u>Each experiment:</u></td><td><u>Pts.</u></td></tr><tr><td>Pre-lab quiz</td><td>20</td></tr><tr><td>Workshop</td><td>10</td></tr><tr><td>Lab Write Ups</td><td><u>70</u></td></tr><tr><td>Total</td><td>100</td></tr></table> <p>There are a total of 12 experiments. One lowest lab grade (labs 1-12) will be dropped at the end of the semester. Lab 14 is a capstone experiment and cannot be dropped.</p> <p>Your final letter grade for the course will be determined using a scale such as the one below where the class average is set at the “B-/C+” border (e.g., 79.5 points):</p> <table><tr><td>A+</td><td>98 &amp; above</td><td>C</td><td>73-76</td></tr><tr><td>A</td><td>93-97</td><td>C-</td><td>70-72</td></tr><tr><td>A-</td><td>90-92</td><td>D+</td><td>67-69</td></tr><tr><td>B+</td><td>87-89</td><td>D</td><td>63-66</td></tr><tr><td>B</td><td>83-86</td><td>D-</td><td>60-62</td></tr><tr><td>B-</td><td>80-82</td><td>F</td><td>59 &amp; below</td></tr><tr><td>C+</td><td>77-79</td><td></td><td></td></tr></table> <p><i>Note: Each Section is a unique course; sections are not graded together, but we have uniform grading scales.</i></p> <p><i>If there is a mistake on your grade, you have <u>one week</u> to change the grade.</i></p>	<u>Each experiment:</u>	<u>Pts.</u>	Pre-lab quiz	20	Workshop	10	Lab Write Ups	<u>70</u>	Total	100	A+	98 & above	C	73-76	A	93-97	C-	70-72	A-	90-92	D+	67-69	B+	87-89	D	63-66	B	83-86	D-	60-62	B-	80-82	F	59 & below	C+	77-79		
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<b>Comet Creed</b>	<p><i>This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:</i></p> <p>“As a Comet, I pledge honesty, integrity, and service in all that I do.”</p>																																						
<b>UT Dallas Syllabus Policies and Procedures</b>	<p><i>The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus.</i></p> <p><i>Please go to <a href="http://go.utdallas.edu/syllabus-policies">http://go.utdallas.edu/syllabus-policies</a> for these policies.</i></p>																																						

***These descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.***