Calumet College of Saint Joseph

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COURSE SYLLABUS

Term: Spring 2017 (2016-2)

Course: CHEM205 GENERAL & ANALYTICAL CHEMISTRY II – SECTION A

Instructor Information:

Instructor Name	Dr. Rogers
Office Number:	335
Phone Number:	219-473-4268
Email:	drrogers@ccsj.edu
Hours Available:	All hours and schedules are posted outside of room 335, however, if the door is open and no one is in there, come on in! No appt necessary, but they are welcomed. Monday through Thursday 6:45AM to 8:30AM. Monday, Tuesday and Thursday 1:30-2:30PM and Wednesdays from 1:30-3:30PM

Instructor Background: ***B.S University of Illinois (Chemistry); Ph.D. University of Illinois (Chemistry); Post-Doctoral Fellow, University of Illinois (Bioanalytical Chemistry); Adjunct Professor: National Louis University (2008), Prairie State College (2008-2009), Elmhurst College (2008-2009), Visiting Assistant Professor: DePaul University (2009-2011) and Assistant Professor of Bioanalytical Chemistry and Director of Undergraduate Studies (2011-2013). Director of the Science Program, Assistant Professor at Calumet College (2013-2016). Department Chair of Science, Math, and Behavioral Science (2015-2016). Director of the Biophysical Chemistry Program, Associate Professor at Calumet College (2016-present). Biophysical Chemistry and Math Department Chair (2016-present).***

What does my research at Calumet College of St. Joseph entail?

- Analyze structural and neurotoxic properties of neurodegenerative-disease related proteins and peptides, which are major suspects of Alzheimer's disease and Parkinson's disease
- Utilize various sample preparation techniques including but not limited to biochemical assays, kinetics, neurotoxic effects involving instrumentation such as fluorescence, UV/Vis, NMR, FTIR, and electron microscopy.

The types of sciences which are involved in my research cover a broad range of interdisciplinary aspects from analytical chemistry, physical chemistry, biophysics, nanotechnology, bioanalytical, molecular biology, biochemistry, and neuroscience.

Theoretically, everyone in this class could get an A. This fact means that you are never in competition with your classmates. I have this policy to encourage you to study in groups for the exams to help each other out. I encourage you to follow your performance using the grades that will be posted on Blackboard.

Course Information:

Course Time:	8:30 AM - 10:00 AM, Mondays and Wednesdays
Classroom:	CCSJ 332
Prerequisites:	Placement into MATH 104 or higher, C or better in CHEM 200 and 200L and concurrent enrollment in CHEM 205L
Required Books and Materials:	**Required on a daily basis** 1. **You will need any current copy of the periodic table to bring with your to class daily. 2. **You will need a scientific calculator. The calculator on your phone does not count. The calculator does not need to be expensive. For example, a Texas Instruments TI-30X II will suffice ($10 at a big box store). **Strongly recommended:** **1.** Chemistry: Structure and Properties: By Niva Tro 1st edition, Pearson Publishing, ISBN# 978-0321729736

Learning Outcomes/ Competencies:

This is a list of very specific learning objectives for Chem 205A lecture. The lab will also provide hands-on opportunities to develop and apply this knowledge. Please note that for many of the topics in this course real world examples are used. If a specific objective is also partially addressed with an experiment, then the experiment number has been included in parenthesis. Also, on occasion, the topics result in brief discussions of economic and societal issues and some historical development can also be done so as to see the role science played in certain world events.

By the end of this course, students will be able to:

1. List factors that affect reaction rates.
2. Write rate laws.
3. Compare first and second order reactions.
4. Determine, using the collision model, the effect of temperature on rates of reactions.
5. Define reaction mechanisms.
6. Describe elementary reactions.
7. Describe and give examples of 2 types of catalysts.
8. Describe equilibrium in terms of Le Chatelier's principle.
9. Write equilibrium constant expressions.
10. Calculate equilibrium constants.
11. Compare and contrast the 3 acid – base models.
12. Perform pH calculations.
13. Distinguish between strong and weak acids and bases.
14. Show the mathematical relationship between Ka and K
15. Using the common-ion effect, calculate the concentrations of ions in buffer solutions.
16. List the factors that affect solubility.
17. Describe a qualitative analysis scheme suitable for separating a selected list of metal ions.
18. Describe the atmosphere and problems that the atmosphere is experiencing in chemical terms.b
19. List current freshwater challenges.
20. Provide evidence of the importance of green chemistry.
21. List the 2nd and 3 rd laws of Thermodynamics.
22. Compare entropy and enthalpy.
23. Solve problems using the Gibbs Free Energy relationships.
24. Balance redox equations.
25. Distinguish between voltaic and electrolytic cells.

26. Calculate cell EMF under specified conditions.
27. Compare types of batteries.
28. Describe the effects of electrolysis and methods to control electrolysis.

Course Description: A 3 credit hour course implementing topics in general chemistry and analytical chemistry which will cover such topics as phase transitions, thermochemistry, spontaneity/equilibrium, electrochemistry, kinetics, bonding, order/symmetry in condensed phases, coordination compounds, descriptive chemistry. Placement into MATH 104 or higher, C or better in CHEM 200 and 200L and concurrent enrollment in CHEM 205L

Learning Strategies:
Active learning, BlackBoard, group discussions, team projects, collaborative learning, lecturing, laboratory exercises, demonstrations.

Experiential Learning Opportunities:
In class discussion, comprehension and critical thinking along with laboratory experience is essential for a fundamental understanding of the scientific method. This course has a required laboratory portion that provides students with experiential learning through experimental design, hypothesis development, data interpretation, and communication of results through laboratory reports.

Assessments:

The point values for each category of assessment are listed below. Point values for each category may be adjusted to reflect actual number of assignments, quizzes, etc., at the professor's discretion and any changes made during the semester supersede the point values reflected here; changes will be announced in class and posted on BlackBoard.

CATEGORY	DESCRIPTION	POINTS
In class activities / Quizzes (about 20-35 total)	Quizzes are given at the beginning of class; covers the assigned reading/previous lectures. In class activities are given at the end of the lecture to verify that you've learned the material and understand the concepts.	**15%**
Lecture Exams	90 minutes, during class (total of 4, dropping the lowest one)	Each 25% **Total 75%**
Final Exam	Cumulative ACS Gen Chem Cumulative Exam.	**10%**
	TOTAL PERCENT	**100%**

Grading Scale

	100 – 92: A	91 – 90: A-
89 – 88: B+	87 – 82: B	81 – 80: B-
79 – 78 : C+	77 – 72: C	71 – 70 : C-
69 – 68: D+	67 – 62: D	61 – 60: D-
59 and below	F	

Note: Concerns about assignment or exam grading must be brought to my attention, in person, immediately after obtaining a copy of your exam from my office. You will have an additional 2 days after the exam (1 day after the assignment) has been graded.

Furthermore, concerns about your overall performance in the course must be brought to my attention before the final exam. Do not contact me after the final exam requesting extra credit or points to receive a grade you want (but did not earn).

Attempts to discuss grades or grading issues over email will not be honored. You must speak with me about such matters during office hours or arrange a time for a separate appointment (contacting me about scheduling such an appointment over email is allowable).

In cases beyond simple arithmetic on the score sheet, the instructor reserves the right to re-grade the whole exam/report. Any issue not explicitly discussed here will be handled at the discretion of the instructor.

Course Schedule:

Week 1: Jan 9-Jan 13
Introduction, Safety and Ethics – Assessment Exam
Solution Concentration, stoichiometry, precipitation reactions and acid base reactions

Week 2: Jan 16-20
***NO CLASS ON* MONDAY, January 16, 2016**
Acid-Base reactions and oxidation-reduction reactions.

Week 3: Jan 23-27
Thermochemistry. Enthalpy, entropy, and calorimetry.

Week 4: Jan. 30-Feb 3
Catch up and Review
EXAM 1

Week 5: Feb 6-10
Gases. Partial Pressure, mixtures, free mean path.

Week 6: Feb 13-17
Liquids, solids and intermolecular forces.

Week 7: Feb 20-24
Review/catch-up
Exam 2

Week 8: Feb 27-March 3
*****Spring Break*****

Week 9: March 6-10
Phase diagram, crystalline solids, and lattice energies.
Types of solutions and solubility. Freezing point of depression, boiling point elevation, osmotic pressure.

Week 10: March 13-17
Chemical Kinetics, Rate law, concentration and temperature effects on rate law.

Week 11: March 20-24
Chemical Kinetics continued.
Chemical Equilibrium

Week 12: March 27-March 31
Chemical Equilibrium. Acids and Bases and their effect of molecular structure. Weak and strong acids. Polyprotic Acids

Week 13: April 3-7 Review and catch up. **<u>Exam 3</u>**
Week 14: April 10-14 Aqueous ionic equilibrium. Titration and pH curves. Solubility and Complex Ion Equilibria
Week 15: April 17-21 Entropy and thermodynamics. Gibbs free energy. EMF. Electrochemistry **<u>Exam 4</u>**
April 24-29 *FINALS WEEK*

I reserve the right to change this schedule to meet the needs of the class.

Responsibilities	
Attending Class	You cannot succeed in this class if you do not attend. We believe that intellectual growth and success in higher education occur through interaction in the classroom and laboratories. However, we do not want to penalize students for participating in college-sponsored events. When you miss class because of a college event, you must give notice of your absence in advance, and you are responsible for all missed work. Being absent doesn't excuse you from doing class work; you have **more** responsibilities to keep up and meet the objectives of this course. <u>Attendance is counted as being present from the first 10 minutes of class until the end of lecture and lab</u>. It is the student's responsibility to make attendance a priority. Anyone missing after the first 10 minutes of class will be marked absent unless a written excuse is provided within 24 hours of the occurrence. Similarly, anyone leaving early without a written excuse will be counted as absent. The class times will be used for lecture, to discuss homework, review material for exams, and administer exams, quizzes, and in-class assignments. Please remember that you are participants during these hours. In order to get the most out of each class, you should read the material we will cover prior to coming to class and **bring a calculator and periodic table DAILY** so that you can participate in in-class activities. It is to your benefit to attend each class meeting. ***<u>You are responsible for all material presented in class and all in-class announcements and assignments.</u>*** Attendance is mandatory, however, for all examinations since they cannot be made up at a later date without a valid excuse left to the discretion of the instructor of this course. *Validated proof must be received and provided immediately to the instructor (no make-ups what so ever for any of the in class assignments).* ***Any*** *exceptions are left to the discretion of the instructor.* Train delays, broken down cars, oversleeping, forgetting, and other personal business are examples of invalid excuses. Additionally, you should plan to arrive on time and remain throughout the lecture to avoid disrupting the class. Other classroom disruptions,

	such as cell phones, pagers, etc. are unacceptable; these devices should be turned off before the start of class. **80% of success is showing up -Woody Allen** There are <u>only 27 class meetings</u> in a given semester, 4 of those class meetings are exams and 1 is the initial introduction day, therefore <u>each class meeting covers ~8%</u> of the course material. You are responsible for your own education. Based on the calculations below, The basic, full-time tuition rate for the academic year, (not including housing, fees, student health etc.) is approximately $15,000. There are a total of 32 hours of class time in a quarter; this means that at the very minimum for **every hour of class costs you about $86.** You have already paid for this class and it is up to you to make the most out of this investment. $$\frac{\$15{,}000}{1\ year} \times \frac{1\ year}{2\ semesters} \times \frac{1\ semester}{12\ credits} \times \frac{3\ credits}{32\ contact\ hours}$$ $$= \$58.59\ per\ hour \times \frac{1.5\ Hours}{1\ class\ meeting} = \$87.89\ per\ class\ meeting$$ If for whatever reason you have to miss class, please approach your fellow students for the notes you missed, and take advantage of the class materials that will be posted on Blackboard http://class.ccsj.edu Intellectual growth and success in college is reinforced through interaction in the classroom. Students reach personal goals and course outcomes through regular and prompt attendance. **<u>Therefore, three (3) unexcused absences will result in an administrative withdrawn from the course.</u>** Participation through regular attendance is required to be successful in this course. Therefore, if a student is absent more than three (3) times (excessive tardiness is counted as absence), the student will be subjected to a grade of F or FW per policy stated under the Withdrawal from Classes section on this syllabus. <u>In the event of absence during an **exam**, the student will receive a ZERO (0) on that exam</u>. The lowest exam score is dropped, so that exam score will not be considered when determining the final grade. If a student is absent during more than one exam, the student will receive a ZERO (0) for each exam, but only one grade will be dropped. It is the student's responsibility to ensure attendance on exam dates. <u>In the event of absence during **lab**, the student will receive a ZERO (0) for that report.</u> As with exams, one lab report is dropped so one absence is permitted without penalty.
Turning In Your Work	You cannot succeed in this class if you do not turn in all your work on the day it is due. Due dates are specified for each assignment on this

	syllabus; any changes will be announced in class and posted on BlackBoard. **ASSIGNMENTS WILL NOT BE ACCEPTED AFTER THEIR DUE DATES.** You may request an extension in writing at least 24 hours in advance of the due date for assignments, but it is up to the instructor's discretion whether or not to allow an extension. **If you are absent the day that an assignment is due, follow these guidelines:** • IN-CLASS ACTIVITIES: not turned in; it is the student's responsibility to do this work independently after an absence. • QUIZZES: cannot be turned in late or made up; student will receive a zero on all missed quizzes. See **"attending class"** above. All assignments can be submitted via e-mail if a link is not provided through BB. It is the student's responsibility to request extensions in writing from the instructor.
Using Electronic Devices	In order to minimize distractions in the classroom, please turn off the sound on cell phones and pagers and keep classroom chatter and eating noises to a minimum. No social media chatting/texting will be allowed to be used during lecture or lab times unless otherwise directed by the instructor. No videotaping or recording of lecture without written consent and discretion of the instructor. The instructor reserves the right to ask you to leave the room if you interrupt the class. The science faculty will address electronic device use as follows: Occurrence • 1st – Student is given a verbal warning. • 2nd - Student is instructed to leave the classroom. The student cannot return to class until they have met with the professor. • 3rd - Student is instructed to leave the classroom. The student can return to class until they have meet with the V.P. of Academic Affairs. *Things can and do happen. If someone really needs to reach you while you are in class, please inform the professor at the beginning of class. You can set your device to "vibrate" and answer your phone call in the hallway.* In order for the lectures to flow smoothly and for the class to get the most of the **t**ime spent together, I request that the use of the podium computer be prohibited 10 minutes prior to lecture and 10 minutes post lecture.
Participating in Class	Participation will be expected during in-class active learning exercises in order to receive full credit for those assignments. Points for those activities is decided based on observations made by the instructor. Full points are awarded to students whom participate in all group activities and laboratory exercises. Disrespectful or disengaged students may be asked to leave and will be marked absent and given a zero for that day's assignment.

	<u>Reading Assignments/Homework</u>: Each week's assignment(s) is (are) laid out on the last page of this syllabus. In regards to any announcements, a reading assignment for that week, and a list of suggested problems from your textbook will be posted on Blackboard. The suggested problems **will be randomly collected and graded as a part of your participation grade**. These problems are intended to help you understand the course material more deeply and help you prepare for the exams. The Blackboard assignments will count towards your final grade (see Blackboard). You should always feel free to work on additional problems in your textbook. Students are **required to read the assigned text materials before class** and are expected to attend classes. This enables in depth discussion of the material, homework questions and current topics in chemistry. Students are expected to ask questions as well as be called upon to answer questions in class. Regular class attendance as well as participation in class activities and discussions will be considered for participation grade. There will also be daily in-class assignments. The assignments will be given on a regular basis. The lowest 2 will be dropped. You may work on these with the help of your classmates and the instructor. These assignments will vary in their content and formatting, and each will cover different material and will be uniquely challenging. Their purpose is to give you individual practice on the skills we are learning and to explore some ideas more thoughtfully and deeply. If you miss a lecture, you are more than welcome to stop by the instructor's office to obtain a copy of any in class assignments that you have missed. However, they will **not** be graded for points. Any exceptions can be left to discretion of the instructor for the final decision. Also, the instructor will not carry any of the missed in-class assignments; it is the responsibility of the student to obtain any material missed and to catch up on any missed lectures. The instructor will **not** give you a personal lecture on what you missed due to your absence. **<u>Exams:</u>** There will be **four, one-hour**, in-class exams. You will be held responsible for all of the material discussed in class, on Blackboard assignments, all in class assignments, and the assigned readings from your textbook. Lecture, the text, in class problems and homework are all fair game. While an occasional homework problem might appear on an exam, most exam problems require you to apply what you have learned to more challenging problems so that your mastery of the material (rather than simply its memorization) can be best assessed.

If you are late for an exam, you must arrive before the first person leaves the room, otherwise you will not be allowed to take the exam and you will receive a 0. Cell phones are expressly prohibited during exams, and must be placed on the ledge and silenced during the exam as shown in the figure to the right.

All students are required to take the ***cumulative*** final exam. The final exam schedule is TBA.

<u>Exam Rules:</u>
Items which students may *not* have near them during the exams include:

- Coats, jackets, hats, or other items of outerwear
- Backpacks, pencil cases, purses, or other bags
- Cell phones or pagers
- Graphing calculators
- Covers for non-graphing calculators

Essentially, you may bring with you a non-graphing calculator (but not its cover) and a pen or pencil (or two). If you are not sure whether an item is permitted, please ask the instructor before the exam. There is no talking during exams.

Items you are not permitted to have during exams should be placed at the designated area prior to the exam. Neither the instructor nor the department is responsible for any loss or theft of personal items.

The instructor retains the right to issue an exam grade of zero to any student found to be in violation of one or more exam rules.

<u>MAKE-UPS:</u>
NO MAKE-UPS. This includes the final exam! Make-up exams **will not** be given except upon the discretion of the instructor which includes: a death in the family and/or athletic competition (not athletic practice). For illnesses, or a death in the family, it will need to be verified and left to discretion of the instructor for the final decision. Athletic competition that interferes with exams will require documentation to be presented to me at the beginning of the course. In all cases, I should be notified as soon as possible, which should be before the exam takes place. Make-up exam will be scheduled within 2 days of date scheduled for all students missing exams for **valid** reasons. Any issue not explicitly discussed here will be handled at my discretion. If you require special accommodations for taking exams due to any form of disability, please provide me with the appropriate documentation

	within the first week of the course to address your needs. Graded exams will not be distributed during lecture time. In order to obtain a copy of your exam, please stop during the instructors' office hours. You are free to go over the exams with the instructor in details. Please see the note in the "Grading Scale". Also, final exams will not be returned to the students. You are free to come by and look at your exam, but the exam will not leave the instructors office.
Doing Your Own Work	If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College. It will be assumed at all times that work handed in is one's own and one's own alone, unless specific credit is given to the contributions of others. The giving or receiving of assistance during examinations is dishonest. Any violations of the academic integrity (i.e., copying assignments, plagiarism, cheating on exams, etc...) will be treated with the utmost seriousness. <u>Cheating on Exams</u> Cheating on exams comes in two forms: (1) Communicating with others in any form, either verbally or nonverbally, as a way of sharing information during an exam; (2) Bringing in some sort of aid, such as notes, to assist you during the taking of an exam. To help facilitate honest test taking, I will require that all cell phones be shut off and put away, all tables cleared, and all hats removed, during all exams. <u>Plagiarism</u> Plagiarism is the presentation of the ideas, opinions, or the writings of others as though it were your own. Plagiarism is stealing. It is dishonest, unethical, and illegal. It is also not a very smart approach to school, because it defeats the point of your being here, namely, to improve your own powers of thought and expression. <u>Consequences of Academic Dishonesty</u> I have zero tolerance for cheating or plagiarism in my classroom. If you are caught cheating on an exam, or if you are caught plagiarizing on a written assignment, you will receive a zero on that exam or written assignment without impunity. You will not be given the opportunity to retake an exam, or to drop or rewrite the assignment. I will also turn the matter over to the proper channels for further possible action. I will have no reservations reporting this activity. If an instructor or other Calumet College of St. Joseph personnel find that a student has plagiarized or been involved in another form of academic dishonesty, the instructor or other personnel may elect to bring the matter up for judicial review. The maximum penalty for any form of academic dishonesty is dismissal from the College. The

	procedures for judicial review are listed under the section of CCSJ handbook that addresses student grievances. PLEASE NOTE: All papers can and may be submitted for checks on plagiarism from the Internet/Electronic sources/Databases. If you turn in work that is not your own, you are subject to judicial review, and these procedures can be found in the College Catalog and the Student Planner. The maximum penalty for any form of academic dishonesty is dismissal from the College. Using standard citation guidelines, such as MLA or APA format, to document sources avoids plagiarism. The Library has reference copies of each of these manuals, and there are brief checklists in your Student Handbook and Planner. This course uses ACS format for all citations. **PLEASE NOTE:** All papers may be electronically checked for plagiarism.
Withdrawing from Class	After the last day established for class changes has passed (see the College calendar), you may withdraw from a course by following the policy outlined in the CCSJ Course Catalog.

Resources	
Student Success Center:	The Student Success Center provides faculty tutors at all levels to help you master specific subjects and develop effective learning skills. It is open to all students at no charge. You can contact the Student Success Center at 219 473-4287 or stop by the Library.
Disability Services:	Disability Services strives to meet the needs of all students by providing academic services in accordance with Americans with Disabilities Act (ADA) guidelines. If you believe that you need a "reasonable accommodation" because of a disability, contact the Disability Services Coordinator at 219-473-4349.
CCSJ Alerts:	Calumet College of St. Joseph's emergency communications system will tell you about emergencies, weather-related closings, or other incidents via text, email, or voice messages. Please sign up for this important service annually on the College's website at: http://www.ccsj.edu/alerts/index.html. In addition, you can check other media for important information, such as school closings: **Internet:** http://www.ccsj.edu **Radio:** WAKE – 1500 AM, WGN – 720 AM, WIJE – 105.5 FM, WLS – 890 AM, WZVN – 107.1 FM, WBBM NEWS RADIO 78 **TV Channels:** 2, 5, 7, 9, 32

Emergency Procedures

MEDICAL EMERGENCY

EMERGENCY ACTION
1. Call 911 and report incident. 2. Do not move the patient unless safety dictates. 3. Have someone direct emergency personnel to patient. 4. If trained: Use pressure to stop bleeding. 5. Provide basic life support as needed.

FIRE

EMERGENCY ACTION
1. Pull alarm (located by EXIT doors). 2. Leave the building. 3. Call 911 from a safe distance, and give the following information: • Location of the fire within the building. • A description of the fire and how it started (if known)

BUILDING EVACUATION

1. All building evacuations will occur when an alarm sounds and/or upon notification by security/safety personnel. **DO NOT ACTIVATE ALARM IN THE EVENT OF A BOMB THREAT.**
2. If necessary or if directed to do so by a designated emergency official, activate the building alarm.
3. When the building evacuation alarm is activated during an emergency, leave by the nearest marked exit and alert others to do the same.
4. Assist the disabled in exiting the building! Remember that the elevators are reserved for persons who are disabled. **DO NOT USE THE ELEVATORS IN CASE OF FIRE. DO NOT PANIC.**
5. Once outside, proceed to a clear area that is at least 500 feet away from the building. Keep streets, fire lanes, hydrant areas and walkways clear for emergency vehicles and personnel. The assembly point is the sidewalk in front of the college on New York Avenue.
6. **DO NOT RETURN** to the evacuated building unless told to do so by College official or emergency responders.

IF YOU HAVE A DISABILITY AND ARE UNABLE TO EVACUATE:

Stay calm, and take steps to protect yourself. If there is a working telephone, call 911 and tell the emergency dispatcher where you are **or** where you will be moving. If you must move,

1. Move to an exterior enclosed stairwell.
2. Request persons exiting by way of the stairway to notify the Fire Department of your location.
3. As soon as practical, move onto the stairway and await emergency personnel.
4. Prepare for emergencies by learning the locations of exit corridors and enclosed stairwells. Inform professors, and/or classmates of best methods of assistance during an emergency.

HAZARDOUS MATERIAL SPILL/RELEASE

EMERGENCY ACTION
1. Call 911 and report incident. 2. Secure the area.

3. Assist the injured.
4. Evacuate if necessary.

TORNADO

EMERGENCY ACTION

1. Avoid automobiles and open areas.
2. Move to a basement or corridor.
3. Stay away from windows.
4. Do not call 911 unless you require emergency assistance.

SHELTER IN PLACE

EMERGENCY ACTION

1. Stay inside a building.
2. Seek inside shelter if outside.
3. Seal off openings to your room if possible.
4. Remain in place until you are told that it is safe to leave.

BOMB THREATS

EMERGENCY ACTION

1. Call 911 and report incident.
2. If a suspicious object is observed (e.g. a bag or package left unattended):

- Don't touch it!
- Evacuate the area.

TERRORISM AND ACTIVE SHOOTER SITUATIONS

EMERGENCY ACTION

1. Call 911 and report intruder.

RUN, HIDE OR FIGHT TIPS:

1. **Prepare** – frequent training drills to prepare the most effectively.
2. **Run and take others with you** – learn to stay in groups if possible.
3. **Leave the cellphone.**
4. **Can't run? Hide** – lock the door and lock or block the door to prevent the shooter from coming inside the room.
5. **Silence your cellphone** -- use landline phone line.
6. **Why the landline?** It allows emergency responders to know your physical location.
7. **Fight** – learn to "fight for your life" by utilizing everything you can use as a weapon.
8. **Forget about getting shot – fight**! You want to buy time to distract the shooter to allow time for emergency responders to arrive.
9. **Aim high** – attack the shooter in the upper half of the body: the face, hands, shoulder, neck.
10. **Fight as a group** – the more people come together, the better the chance to take down the shooter.
11. **Whatever you do, do something** – "react immediately" is the better option to reduce traumatic incidents.