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COURSE SYLLABUS

Term: Spring 2016 (2015-2)

Course: CHEM143L NUTRITIONAL SCIENCE LAB- SECTION A
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Instructor Information:	
Instructor Name	Dr. Sandra Chimon Rogers (aka Dr. R)
Office Number:	335
Phone Number:	219-473-4268
Other Contact	Cell/Text (773)719-8759 (please identify yourself first) Snapchat DrPeszek
Email:	drrogers@ccsj.edu All e-mail communication MUST be through your CCSJ e-mail account and contain "CHEM205A Spring" in the subject line if you expect a response.
Hours Available:	All hours and schedules are posted outside of room 335. Monday & Wednesday from 6:45AM to 8:30AM. Tuesday 6:45AM-11:45AM, and Thursday 6:45AM – 10:15 AM. Monday-Thursday 1:30-2:00PM

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-present). Department Chair of Science, Math, and Behavioral Science (2015-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:	10:15 AM- 11:45 AM, Thursdays
Classroom:	CCSJ 332
Prerequisites:	Placement into MATH 103 or higher and concurrent enrollment Chem 143
Required Books and Materials:	<p style="text-align: center;">Required on a daily basis</p> <ol style="list-style-type: none"> 1. **You will need any current copy of the periodic table to bring with you 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). 3. Lab Notebook 4. Lab Goggles <p style="text-align: center;">Strongly recommended:</p> <ol style="list-style-type: none"> 5. Chemistry: Structure and Properties: By Niva Tro 1st edition, Pearson Publishing, ISBN# 978-0321729736 6. Lab Apron or Lab Coat
<p>Learning Objectives/ Competencies: This is a list of very specific learning objectives for Chem 143A lab. 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.</p> <p>Course Outcome:</p> <ol style="list-style-type: none"> 1. Scientific Knowledge and Critical Thinking 2. Research Skills and Problem Solving Ability 3. Specific Expertise 4. Communication 5. Ethics and Advocacy 6. Career Preparation <p>Scientific Nutrition is a course that covers the areas of foods and nutrition from a scientific approach. Studies prepare students for many science, dietetics, food industry, and health-related careers. Producing, processing, preparing, evaluating, and using food are all aspects of this field. They are interrelated, and cross over into many branches of science, including biology, botany, physiology, zoology, bacteriology, organic chemistry, physics, and biotechnology. Although many topics food science may be investigated, the primary emphasis of this course is on the science of nutrition.</p> <ol style="list-style-type: none"> 1. <i>Analyze how knowledge and skills involving consumer and resource management affect decisions related to the well-being of individuals, families, and society.</i> 2. <i>Demonstrate nutrition and wellness practices that enhance individual and family well-being.</i> 3. <i>Demonstrate transferable and employability skills in family, community, and work/career settings.</i> 4. <i>Integrate multiple life roles and responsibilities in family, career, and community roles and responsibilities.</i> 5. <i>Evaluate management practices of the human, economic, and environmental resources.</i> 6. <i>Integrate knowledge, skills, and practices required for careers in food production and services</i> 	

7. *Integrate knowledge, skills, and practices required for careers in food science, dietetics, and nutrition.*
8. *Demonstrate nutrition and wellness practices that enhance individual and family well-being*
9. *Evaluate nutrition principles, food plans, preparation techniques, and specialized dietary plans.*
10. *Evaluate the nutritional needs of individuals and families in relation to health and wellness across the life span.*
11. *Analyze factors that influence nutrition and wellness practices across the life span.*
12. *Identify nutritional needs of individuals and families.*
13. *Appraise and interpret nutritional data.*
14. *Assess the effects of nutrients on health, appearance, and peak performance.*

Course Description:

A 1 credit hour course implementing topics in nutrition through experiential learning and labs. Pre-requisite is placement into Math 103 or higher, C- and concurrent enrollment in CHEM 143. Laboratory Fee: See current fee schedule.

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
Lab Reports	Given at the beginning of semester including the rubrics, background information, sample writing, pre-lab assignments, post lab assignments, and required materials for each lab. Each complete lab is worth 40 points. 9 labs will be performed. 8 out of 9 labs will count (lowest 1 is dropped).	100%

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

C	77-72	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).
C-	71-70	
D+	69-68	
D	67-62	
D-	61-60	
F	59 and below	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.

Each experiment is worth 40 points that are distributed across a pre-laboratory assignment, a written report or worksheet, and a laboratory category (e.g. preparedness, goggle use, etc.). Each week a specific grading rubric for that week's laboratory will be posted online. The instructor will use the scheme on the rubric to grade the report.

Any student concerns about grading on laboratory reports or other evaluated work must be addressed within one week after receipt of the graded material. The lowest laboratory score will be dropped and the grade computed out of the remaining scores. The percentage score will be determined, and the following scale applied.

Responsibilities	
Attending Class	<p>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.</p> <p><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.</p> <p>First class is on Thursday, January 14th, 2016. Thursday's labs are 1 ½ hours long from 10:15 until 11:45 AM. These 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.</p> <p>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</p>

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 by the instructor 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 only 27 class meetings in a given semester, 4 of those class meetings are exams and 1 is the initial introduction day, therefore each class meeting covers ~8% 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.

$$\begin{aligned} & \frac{\$15,000}{1 \text{ year}} \times \frac{1 \text{ year}}{2 \text{ semesters}} \times \frac{1 \text{ semester}}{12 \text{ credits}} \times \frac{3 \text{ credits}}{32 \text{ contact hours}} \\ &= \$58.59 \text{ per hour} \times \frac{1.5 \text{ Hours}}{1 \text{ class meeting}} = \$87.89 \text{ per class meeting} \end{aligned}$$

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. **Therefore, one (1) unexcused absences will result in an administrative withdrawn from the course.**

Attendance is required for laboratory. There are no make-ups for missed labs. If a student arrives more than ten minutes late to lab, he/she will be considered absent and will receive a grade of zero for that laboratory experiment. Students who arrive late (within the requisite ten minutes) to the laboratory will not be given extra time to complete the lab. Laboratory instructors and TAs are not required to permit students to continue working beyond the scheduled end time of the lab.

Students with two or more unexcused absences from the laboratory will automatically fail the course. Excusable reasons may include: participation in a CCSJ varsity sporting event or a scientific conference,

	<p>an illness that keeps the student from attending school, or a death in the family; student athletes must provide documentation from the Athletic Department regarding any scheduled sporting competition before the missed laboratory session takes place. For these excusable reasons only, the situation will be handled at the discretion of the laboratory instructor.</p>
Turning In Your Work	<p>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.</p> <p>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.</p>
Using Electronic Devices	<p>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.</p> <p>The science faculty will address electronic device use as follows:</p> <p style="padding-left: 40px;">Occurrence</p> <ul style="list-style-type: none"> • 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 met with the V.P. of Academic Affairs. <p><i>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.</i></p> <p>In order for the lectures to flow smoothly and for the class to get the most of the time spent together, I request that the use of the podium computer be prohibited 10 minutes prior to lecture and 10 minutes post lecture.</p>
Participating in Class	<p>A careful reading of the laboratory manual is required before performing an experiment. You should have a clear understanding of the theory behind the experiment, the reaction(s) that will be studied, and any data analysis or calculations that must be completed. In order to ensure that you are prepared for the laboratory experiment, you will be asked to both prepare your lab notebook and complete a pre-laboratory assignment.</p> <p>a. Pre-lab Questions: In order to gain entrance to the lab, students must present a completed pre-laboratory assignment to the laboratory instructor. The pre-laboratory assignments are part of the laboratory instruction materials. If a student</p>

arrives without a completed pre-laboratory assignment, the laboratory instructor has the right to ask the student to leave the lab. In this case, the student will be considered to have an unexcused absence from the lab.

- b. **Laboratory Notebook Preparation:** No laboratory instruction materials will be allowed in the laboratory unless otherwise informed by the instructor. Any specifics about the procedure must be recorded in the laboratory notebook before the laboratory period begins. If a student arrives unprepared for lab, the laboratory instructor has the right to ask the student to leave the lab. In this case, the student will be considered to have an unexcused absence from the lab.
- c. **Laboratory Notebook and Related Scientific Ethics:** You must record all data in an official course laboratory notebook. This is a spiral bound notebook that may be obtained from the bookstore. Make sure that you write your name on your notebook and supply any other pertinent contact information that can be used to return the notebook to you in case it is lost.

One goal of this course is to introduce you to the proper manner of keeping a laboratory notebook. The rules of notebook keeping delineated below are all aimed at ensuring that your notebook is a faithful and complete representation of your work in the lab. Ethically, a scientist cannot remove evidence of any work they have done from the lab notebook. Incorrect work can be noted as such, but anyone looking at your notebook should be able to observe any errors you have made. Additionally, a scientist cannot prove they first discovered something if evidence of this discovery is not present in a lab notebook with the date on which the discovery was made, and the signature of a witness to the discovery. Scientists rely on the information present in laboratory notebooks to avoid repeating mistakes and make efficient progress. For all of these reasons, you will be asked to maintain a high-quality laboratory notebook.

All data recorded in the laboratory notebook must be recorded in **black or dark-blue ink only**. Notes taken in pencil, or in pencil overwritten in pen, will reduce the laboratory notebook score. You will be making a carbon copy of your data. Make sure your carbon copies are clear and legible. Press hard and use the inside flap of the notebook to protect other sheets. **NEATNESS COUNTS!** The instructor will verify your data and calculations. If the instructor cannot read your data sheets because of bad penmanship, organization, or other neatness factors, your report grade may suffer.

If you make a mistake, delete entries by crossing them out neatly with a single line. This practice ensures that anyone who sees your notebook can see any errors you have made, as well

as your correct work. You cannot write your work on scrap paper; any scrap paper notes found will be confiscated and not returned. Before leaving the laboratory have the laboratory instructor sign the page(s) with your data and turn in the duplicate(s) of the page(s) you worked on. Original pages should **never** be torn from the notebook. The notebook should retain an intact sequence of numbered pages. Please be aware that your laboratory notebook is subject to inspection to verify and authenticate your experimental observations.

The notebook pages must contain any and all pieces of information needed to obtain the final results for the experiment. Such information includes, but is not limited to:

- The title of the experiment
- The name of your laboratory partner, if applicable
- The date of the experiment
- The procedure for the experiment (**not** a word-for-word copy of the lab manual contents, but your notes that will allow you to complete the experiment)
- A detailed list of procedural changes
- A detailed list of equipment and its condition
- Clearly written data with *proper significant figures* and *units*, in tabular form
- Clearly written calculations with proper significant figures and units

The burden is on you to make sure you have all of the data that is necessary to write a successful laboratory report. Performing the calculations before leaving lab will help make sure that you have all of the necessary data. Every student in the lab will have their notebook reviewed by the instructor. This is to occur after the completion of every lab meeting. You will be graded on how you prepare and maintain your laboratory notebook, the accuracy of your calculations, and the accuracy of your results.

Laboratory Rules: If you fail to adhere to the safety rules delineated below you will not be allowed to remain in lab. Behavior that is deemed by the instructor to be unsafe to yourself or to others will result in your dismissal from that week's experiment. You will not be allowed to finish the lab at a later time.

- The use of cell phones in the laboratory is strictly forbidden. Your cell phone must be turned off for the duration of the laboratory period.
- If you are pregnant, you must obtain a letter from your obstetrician that states that it is safe for you to conduct experiments during the quarter and you must submit this letter to your lab instructor.

- Safety glasses/goggles must be worn at all times in the lab. Contact lenses are not recommended; wear prescription glasses instead.
- Open-toes shoes, shorts, skirts, short-sleeved shirts, tank-tops, and excessively loose or flowing clothes are forbidden in the lab. You must adhere to the lab attire rules or you will be asked to leave the lab.
- Smoking, eating, drinking, gum chewing, and applying cosmetics in the lab are prohibited.
- Long hair must be tied back.
- Gloves must be worn when handling chemicals. You must remove your gloves before exiting the laboratory. Always wash your hands after each lab.
- Never use your mouth to pipette a liquid; use a pipette bulb.
- Never leave experiments unattended.
- Never return excess chemicals to the stock bottle.
- Dispose of waste in the appropriately-labeled containers ONLY.
- Always return equipment in its original condition and to its original location.
- Clean up after yourself. Clean your part of the laboratory bench at the end of your stay in the lab. Points will be taken off the lab report grade if the balance room or the laboratory is left untidy.

General Laboratory Guidelines:

- Know the locations of the safety shower, eye wash stations, and first aid kit in the lab.
- Report all personal injuries to the instructor who will assess the wound and summon professional help if necessary.
- Assume the chemicals are dangerous unless you are told otherwise.
- Work only with clean equipment and glassware (dry) on a clean bench top.
- Carefully handle and measure appropriate quantities of the reagents needed in the experiment.
- Use the right chemicals – pay attention to the names of the chemicals you plan to use. You could cause a serious accident if you mix the wrong chemicals.
- Save all solutions and solids until you have successfully completed the experiment.
- Manage your time wisely so that you do not rush or take short cuts.
- Record all data in ink in your laboratory notebook while you work! Do not write data, even temporarily, on scraps or other pieces of paper. Make sure your data is complete. Make sure to record the date or the unknown number, if any.
- If you do not know or are unsure about any aspect of your experiment, ask the instructor.

	<p>Your preparedness and behavior in lab will be evaluated as part of your lab report grade. If you follow the rules and guidelines stated above, earning these points should be straightforward.</p> <p>Laboratory Reports/Worksheets: Laboratory reports or worksheets are typically due one week after the completion of an experiment. No late work will be accepted. Students should use the posted rubric as a guide when preparing the laboratory report or worksheet. The rubric must be printed and attached as a cover sheet for the reports or worksheets, which must be submitted to the laboratory instructor upon entry to the laboratory session unless otherwise indicated.</p> <ol style="list-style-type: none"> a. Only hardcopies of reports or worksheets will be graded. In addition, electronic copies of the laboratory reports must be submitted to the corresponding experiment's dropbox on Blackboard (Bb). Hand-written calculations do not need to be submitted electronically. Failure to upload your lab report to the appropriate digital dropbox on time will automatically result in a 5-point deduction in your lab report grade (12.5% of your grade). Please note that all laboratory reports submitted electronically will be examined using <i>Turn-It-In</i> technology in order to ensure that the work is your own creation. b. In instances of excusable absences from lab, the student must make every effort to deliver the previous week's report or worksheet on time. If it is impossible to deliver a hard copy of the report or worksheet on time, an electronic version should be submitted to Bb before the start of the lab. A hard copy must then be delivered as soon as possible to the laboratory instructor (or placed in the instructor's mailbox in the chemistry department office). The hard copy of the report must be received before the start of the next laboratory period. Any substantive differences between the electronically submitted and hard copies of the laboratory report will not be graded. <p>Laboratory Resources: The lab instructor has office hours during which they can answer questions regarding pre-lab assignments, calculations from a lab, the writing of lab reports, etc. If you have questions regarding the formatting, organization, etc. of your lab report, you should refer first to the rubric for the lab and the lab report writing guidelines; both of these are available on Bb. If you still have questions, you should contact the lab instructor. With enough notice, they may be able to look over a rough draft of your report. In addition, the Center for Writing has tutors familiar with writing lab reports that can help you revise a rough draft. In all cases, it is important to schedule an appointment several days before your report is due.</p>
Doing Your Own Work	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.

Cheating on Exams

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.

Plagiarism

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.

Consequences of Academic Dishonesty

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 MLA 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:	<p>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.</p> <p>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</p>