



South Texas Preparatory Academy  
Integrated Physics and Chemistry (IPC)

**Integrated Physics & Chemistry (IPC)**

**Mrs. Maria Mon**

**Room 110**

**Conference Period: A day-4<sup>th</sup> period (1:40-3:05pm) B day-1<sup>st</sup> period (8:30-9:50am)**

**Work Phone: (956) 381-5522 ext 2637**

**E-mail: [maria.mon@stisd.net](mailto:maria.mon@stisd.net)**

**Course Description**

IPC is a laboratory oriented science course that provides an opportunity for students to investigate scientific related topics using the scientific method and to make informed decisions using critical thinking and scientific problem solving. Students will experience the natural world directly through hands on activities as they learn concepts, terms, symbols, or equations that the scientific community uses to explain the natural world.

**Adopted Textbook**

2013. Holt *Science Spectrum Physical Science with Earth and Space Science*. Holt, Rinehart and Winston.

My.hrw.com

Username: s8sci

Password: a3w5s

**Materials**

2 Composition Notebooks (100 page)  
2 two pocket folder with brackets (not a binder)  
Wide Ruled or College Ruled Notebook Paper  
Pens and pencils  
Highlighters

**Grading**

40% of the course average will come from tests and projects  
40% of the course average will come from quizzes and lab reports  
20% of the course average will come from daily work and lab activities

\*75% of course average is calculated from weighted categories described above and 25% from a cumulative exam.

**Daily work guidelines**

Homework is due at the beginning of the period on the due date. Students absent on a day work is assigned shall be given the same amount of time to complete the assignment as the rest of the class. Students absent on the day the work is due shall receive a due date for the next day the student returns to class. If a student fails to turn in homework or complete class work, he or she may be assigned to mandatory lunch homework intervention. Students who fail to turn in assignments on the due date will have **10 points** deducted per day with the maximum deduction of **50 points**. Please be aware that an alternate make-up assignment may be given at the teacher's discretion.



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### Lab Work

Most lab work will be a team effort. Each member of a team is expected to contribute towards achieving the lab objectives. For the safety of the students and others, any student not following lab safety procedures will be removed from the lab and given an alternate assignment and/or disciplinary action at the discretion of the instructor.

### Assessments

- A. **Quizzes** are designed to monitor the student's progress on regular basis and may be announced or unannounced. Students are expected to be prepared for each quiz. **Students who receive a failing grade may attend afterschool tutorial for extra points.**
- B. **Tests** will be scheduled after every major topic. Tests may consist of two parts:
  - 1. Objective- MC, Matching, T/F, Fill in the Blank
  - 2. Subjective- short answer questions**Students who receive a failing grade on an test may retake an alternative test within 5 school days of receiving the results of their test AND only after he/she has met the following conditions:**
  - 1. Student attends at least one tutoring session
  - 2. Teacher and student come into agreement for retest date.
  - 3. Students will be given a maximum grade of 80
- C. **Common Assessments**- Formative and summative assessment will be given throughout the year to measure academic growth.
- D. **Semester Exams** - Students are encouraged to maintain a Science notebook and keep quizzes and tests throughout the school year. **Semester exams will count 25% of the students final grade. There is no retest for semester exams**

### Projects

This course requires several major and minor projects throughout the year. Some of the projects may be online while others will be constructed by hand. Please make sure to use your planners to keep track of upcoming projects.

### Pyramid of Intervention

The objective of this class is for every student to be successful in demonstrating mastery of the Texas Essential Knowledge and Skills (TEKS). Students not successfully progressing will be assisted using the pyramid of interventions. These interventions may include special class activities and assignments and/or required tutoring afterschool, parent contact, and other interventions specific for the student.

### Cell Phone Use

#### Possession and Use of Personal Telecommunications Devices, Including Mobile Telephones

For safety purposes, the district permits students to possess personal mobile telephones; however, these devices must remain turned off and not visible during instructional day (may be used during lunch outside or in the cafeteria only [privilege may be revoked by administration]), including during all testing, unless they are being used for approved instructional purposes. **As per student handbook page 31.**



## IPC Course Summary

*Please keep the course outline for your reference and return this form to the instructor.*

I have received a copy of this course outline, have been given the opportunity to ask questions, and understanding the contents:

Student Name: \_\_\_\_\_ Grade Level: \_\_\_\_\_ Period: \_\_\_\_\_  
(Print Name)

Science Instructor: Mrs. Maria Mon Signature: Maria Mon

Department Chair: Ms Blanca Nieto Signature: Blanca Nieto

Principal: Mrs. Ana Castro Signature: Ana Castro

Parent/Guardian Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Student Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Home Phone: \_\_\_\_\_ Cell Phone: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

I have read and I understand the class expectations. By signing I am agreeing to comply.

Student Signature

Parent/Guardian Signature

Date

THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY

1954  
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EXPERIMENTAL PROCEDURE

1. Preparation of the reagent. Weigh 10.0 g of sodium metal and place it in a 250 ml round-bottom flask equipped with a magnetic stirrer. Add 100 ml of absolute ethanol and allow the mixture to stir for 30 minutes. The solution should become a deep red color.

2. Synthesis of the product. Dissolve 5.0 g of the starting material in 50 ml of absolute ethanol in a 100 ml round-bottom flask. Add this solution to the sodium-ethanol solution prepared in step 1. The mixture should become a dark red color. Stir the mixture for 2 hours at room temperature. The color should change to a deep red. Add 100 ml of absolute ethanol to the mixture and stir for 1 hour. The mixture should become a deep red color.

3. Purification of the product. Filter the mixture through a filter paper into a 250 ml round-bottom flask. Wash the flask with 10 ml of absolute ethanol. Combine the filtrate and washings. Add 100 ml of absolute ethanol to the mixture and stir for 1 hour. The mixture should become a deep red color. Filter the mixture through a filter paper into a 250 ml round-bottom flask. Wash the flask with 10 ml of absolute ethanol. Combine the filtrate and washings. The product is a deep red solid.

4. Characterization of the product. The product is a deep red solid. The melting point is 150-155°C. The infrared spectrum shows a strong absorption at 1650 cm<sup>-1</sup>. The <sup>1</sup>H NMR spectrum shows a multiplet at 7.5 ppm and a multiplet at 6.5 ppm. The mass spectrum shows a molecular ion peak at m/z 150.