

## PHYSICAL EDUCATION DEPARTMENT

An individual's most valuable asset is good health. No educational process can be adequate or complete if it neglects the physical education of the individual student. Being physically fit enhances self-image and self-confidence which is important to young people in the years when they are growing socially and intellectually. The department's basic goal is good health for a lifetime. Students learn to understand individual needs and values so they may continue to enjoy good health while growing socially and intellectually.

**Department Chair – Mr. Dennis Baker – 402.557.3362**

### **Number of Credits Required for Graduation:**

Four semesters

### **Required Courses:**

None

### **Honors Courses:**

None

### **Elective Courses:**

Aerobics 1-2

Adv. Aerobics 1-2

Lifetime Sports/Activities 1-2

Team Sports 1-2

Light Weight Training/Conditioning 1-2

Weight Training/Conditioning 1-2

Adv. Weight Training 1-2

Adv. Weight Training/Conditioning 1-2

PE Mentors

### **AEROBICS 1-2**

This course provides class activities designed for improvement in cardiorespiratory endurance, flexibility, and muscular development. Activities may include jogging, power walking, water exercise, step aerobics, line dancing, physical fitness, goal-setting and nutritional planning.

*Prerequisites: None*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 9, 10, 11, 12*

### **ADV AEROBICS 1-2**

Students will be involved in a variety of activities for cardiovascular fitness including dance, step aerobics, free weights, water aerobics, kick aerobics and much more. The class will help increase and develop the students' cardiovascular endurance, muscle strength and endurance. Students will also become familiar with the human anatomy as well as develop nutritional plans for themselves.

*Prerequisites: Grade of "C" or better in Aerobics 1-2*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 10, 11, 12*

### **LIFETIME SPORTS/ACTIVITIES 1-2**

This course provides instruction in activities that students may participate in throughout their lives. These may include: archery, badminton, bowling, golf, ultimate Frisbee, volleyball, softball, tennis, and fitness development. Aquatics are included where facilities permit.

*Prerequisites: None*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 9, 10, 11, 12*

### **PE MENTORS**

This course is designated for exceptional learners to participate in physical education with ACP students. P.E. Mentors will be responsible for assisting ACP students with their objectives individually and as a group. This course is designed for all students to improve cardiovascular fitness, muscular strength, muscular flexibility, and body composition. Emphasis is placed on sportsmanship and developing motor skills needed for independent living for the ACP population. Student enrollment will be limited to 11th and 12th graders and will need both teacher and administrator approval.

*Prerequisites: Students must have two teacher recommendations, administrator's signature, and completed application.*

*Duration: 1 semester*

*Credit: 1*

*Grade Level: 11, 12*

### **TEAM SPORTS 1-2**

This course will consist of instruction in rules, strategies, skills and sportsmanship concepts. Activities may include: flag football, soccer, volleyball, basketball, team handball, softball, and floor hockey. A fitness unit will be taught.

*Prerequisites: None*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 9, 10, 11, 12*

### **LIGHTWEIGHT TRAINING/CONDITIONING 1-2**

This course emphasizes improvement in muscular endurance, strength and power. Proper lifting techniques are taught through the use of light weights and high repetitions. Healthy living concepts, such as proper nutrition and stress reduction, will be a part of class discussions. A fitness unit will be taught.

*Prerequisites: Must be second year student.*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 10, 11, 12*

### **WEIGHT TRAINING/CONDITIONING 1-2**

This course provides instruction in proper techniques using free weights and machines, as well as other fitness activities, to improve strength, flexibility and aerobic capacity.

*Prerequisites: Must be second year student.*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 10, 11, 12*

### **ADV WEIGHT TRAINING 1-2**

This is a second year class that expands instruction in strength, flexibility and aerobic training.

*Prerequisites: "C" or better in Weight Training/Conditioning 1-2*

*Duration: 2 semesters*

*Credit: 1 per semester*

*Grade Level: 11, 12*

## ADV WEIGHT TRAINING/CONDITIONING 1-2

Using their experience and knowledge gained in Weight Training 1-2 and Advanced Weight Training 1-2, students will research, design, and implement their own specialized workout program. As they progress through the class they will document their work. Instructor serves as an advisor throughout the process. Students will be allowed to work more independently than in other classes.

*Prerequisites:* Adv. Weight Training 1-2 teacher's signature or varsity head coach's signature or PE department chair signature (**Varsity athlete must have already passed Weight Training 1-2**).

*Duration:* 2 semesters

*Credit:* 1 per semester

*Grade Level:* 11, 12 (grade 11 for varsity athlete only)

## SCIENCE DEPARTMENT

Science and Technology are major influences in the lives of everyone. The Science Department offers a sequence of courses that give students' basic science knowledge through the use of scientific processes and technology. The courses are designed sequentially to prepare students for each future science class, as well as to foster inquiry, problem solving skills which are needed to produce scientifically literate citizens. The continued advances in technology require citizens to have an appreciation and understanding of science and the role it plays in society. Each successive science course is developed by expanding and unifying the concepts and processes of the previous course. Each science course fulfills the requirements of the Nebraska Science Standards.

**Mrs. Janis Elliott – 402.557.3383**

### Number of Credits Required for Graduation:

Six

### Required Courses:

Biology 1-2

Chemistry 1-2

Two semesters of Elective Courses

OR

Physical Science 1-2

Biology 1-2

Two semesters of Elective Course(s)

College/University bound students are encouraged to take biology, chemistry and physics to prepare them for the rigor of higher education classes.

### Honors Courses:

Honors Physical Science 1-2

Honors Biology 1-2

Honors Anatomy and Physiology 1-2

Honors Chemistry 1-2

Honors Physics 1-2

Honors Science Seminar

### AP Courses:

AP Biology 1-2

AP Chemistry 1-2

AP Physics B 1-2

AP Physics C: Electricity and Magnetism 1-2

AP Physics C: Mechanics 1-2

### Elective Courses:

Honors Anatomy and Physiology 1-2

Anatomy and Physiology 1-2

Biology 3-4

Earth Science 3-4 (Honors Option)

Science Seminar 1-2 (Honors Option)

Forensics 1 (Honors Option)

Environmental Science 1 (Honors Option)

Astronomy 1 (Honors Option)

Marine Biology/Oceanography 1 (Honors Option)

**Advanced Science Sequence: This special sequence is designed for students that desire a high level of academic challenge, have mature work/study skills and are willing to take the Advance Placement (AP) exams that may lead to college/university credit.**

### Three Year Advanced Sequence:

Freshmen: Honors Biology 1-2

Sophomores: AP Biology

Juniors: AP Chemistry 1-2

Seniors: AP Physics B or C 1-2

### Two Year Advanced Sequence:

Freshmen: Honors Biology 1-2

Sophomores: Honors Chemistry 1-2

Juniors: AP Chemistry

Seniors: AP Physics B or C 1-2

### Requirements to enter the Advanced Science Sequence are:

Honors Biology 1-2 with a grade of "A" both semesters

Honors Geometry or Honors Algebra 3-4 with a grade of "A" or "B" both semesters

Completed entrance application (distributed prior to course registration in the spring)

Teacher recommendation

Parent approval (signature on application form)

## PHYSICAL SCIENCE 1-2

Physical Science is a course designed to expose students to selected concepts in chemistry, physics and earth science. Taught as from an inquiry base, topics includes states of matter, physical and chemical change, bonding, atomic structure, periodic table, motion/kinematics, Newton's Law, energy conversions and energy conservation, waves, sound and light. It is taught as a platform course for education upon high school graduation and competence on the state science test.

*Prerequisites:* None

*Duration:* 2 semesters (single period)

*Credit:* 1 per semester

*Grade Level:* 9

## HONORS PHYSICAL SCIENCE 1-2

Physical Science is a course designed to expose students to selected concepts in chemistry, physics and earth science. Taught as from an inquiry base, topics includes states of matter, physical and chemical change, bonding, atomic structure, periodic table, motion/kinematics, Newton's Law, energy conversions and energy conservation, waves, sound and light. It is taught as a platform course for education upon high school graduation and competence on the state science test.

*Prerequisites:* Completion of, or concurrent enrollment in, Algebra 1-2 with no junior high/middle school science or math grades less than "C" and teacher recommendation

*Duration:* 2 semesters (single period plus lab period every other day)

*Credit:* 1 per semester

*Grade Level:* 9