

# SCHOOL OF INNOVATIVE TECHNOLOGY

JACK E. SINGLEY ACADEMY

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★ identifies a course as ADVANCED.

# TECHNOLOGY SUPPORT SERVICES

## STUDENT / PARENT ORIENTATION REQUIRED.

# 1

### Principles of Information Technology [75301/2A PRINIT 13027200]

Grades: 9 Credits: 1 SINGLEY

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NETWORKING - WI-FI – CONNECTIVITY: In Principles of Information Technology students develop knowledge of the parts of a computer; the hardware components and the programs that are used on the computer; the software associated with information technology. Students will apply word-processing, database, spreadsheet, and presentation management by utilizing Microsoft Office Suite. Students will develop an understanding of computers and computer literacy skills to help them grow and develop the skills of the emerging technologies used throughout the world and in the global marketplace.



(AND)

### Web Technologies [75361/2A WEBTECH 13027900]

Grades: 9 Credit: 1 SINGLEY

CODING – PROGRAMMING – DESIGNING are all part of Web Technologies. Learn how the internet works on code. Join the web technologies class and learn to implement personal and interpersonal skills to prepare you for an evolving workplace environment. Acquire and practice skills that will enable you to successfully perform and interact in a technology-driven job. You will put to use your abilities to read, write compute, communicate, and think when using technology to communicate.

# 2

### Computer Maintenance / Lab [77841/2A COMMLAB 13027310]

Grades: 10 Credits: 2 SINGLEY

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ASSEMBLE – REPAIR – INSTALL: In Computer Maintenance students will acquire the principles of computer maintenance, including electrical and electronic theory, computer hardware principles, and broad level components related to the installation, diagnosis, service, and repair of computer systems. Students will learn to communicate with internal and external customers, and to evaluate computer hardware, operating system, and software solutions. Student will prepare to take the Comp TIA A+ Certification and Microsoft Technology Associate Certification exams.

# 3

### \* Networking / Lab [77861/2A NETWRLAB 13027410] – DUAL credit [77851/2A NETWRLAB 13027410] – Non-dual

Grades: 11 Credits: 2 SINGLEY

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CONNECT – INSTALL – MAINTAIN: In Networking students develop knowledge of the concepts and skills related to information and communications technology and practices in order to apply them to personal or career development. Students learn to install, connect, maintain, and repair networked devices. Students will explore Information Technology certifications and careers. Student will prepare to take the Comp TIA A+ Certification, Cisco, and Microsoft Technology Associate Certification exams.

# 4

## ✦ Computer Technician Practicum / Extended

[77881/2A EXCOMPT1 13027505]

[Prerequisite: Networking / Lab]

Grades: 12

Credits: 3

SINGLEY

SERVICE – REPAIR – DIAGNOSE: In the computer Technician Practicum students will gain knowledge and experience in the area of computer technologies, including advanced knowledge of electrical and electronic theory, computer principles, and components related to the installation, diagnosis, service, and repair of computer-based technology systems. **This course serves as the capstone course for students completing the Computer Support Specialist pathway. Students will be required to complete a paid, or unpaid off-campus work experience. The type of work and hours assigned will be determined by the instructor. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

**Parent/Student Orientation REQUIRED**

# CYBER SECURITY

## STUDENT / PARENT ORIENTATION REQUIRED.

1

### Principles of Cyber Security

[76981/2A CYBRSEC N1302810]

Grades: 9 Credits: 1 SINGLY

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NETWORK – MEDIA – ONLINE: In Principles of Cyber Security students will introduced to the profession in cyber security services. Students will examine the roles and responsibilities of police, courts, private security, emergency agencies, protective agencies, and emergency services as related to cyber security. Students develop cyber security skills and knowledge to adapt to emerging technologies used in the global environment. Students implement personal and interpersonal security skills to prepare for a rapidly evolving cyber workplace and environment. Students enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology relating to cyber security.



(AND)

### Geographic Information Systems

[75391/2A GIS N1302805]

Grades: 9 Credits: 1 SINGLY

DRONES – DATA – CAPTURE: In Geographic Information Systems students will learn all aspects of mapping and planning activities. Students will learn the basics of flight and control along with maintenance and safety required to operate a drone. This course will also provide students with the knowledge and skills necessary to utilize computer hardware and software, and geographic data to capture, manage, and analyze geographically referenced information.

2

### Cyber Security Maintenance

[76351/2A CYBERMAIN 13027300]

Grades: 10 Credits: 1 SINGLY

↓  
DIAGNOSE – SERVICE – INSTALL: Student in the Cyber Security computer maintenance program will develop skills through hands on activities including electrical and electronic theory, computer installation, diagnosis, service, and repair of computer systems. Students will apply knowledge through lab simulations relating to cyber security, network security, and cyber investigations.



(AND)

### Cyber Security I

[75021/2A PROG CYBER 13027600]

Grades: 10 Credits: 1 SINGLY

THREATS-SECURITY-VULNERABILITIES: Students in Cyber Security I will develop knowledge of the concepts and skills related to cyber security threats in a mobile telecommunications and data networking environment. The skills are then applied to national cyber security needs and information technology security career areas. Students investigate the threats to networks and computers workstations in a global environment, while developing and understanding of the solutions required to protect network and computer information. Students participate in Cyber Patriot where they test their skills for finding vulnerabilities within operating systems while maintaining critical services.

3

### Raster Based Geographic Information Systems

[75401/2A RBGIS N1302806]

Grades: 1 Credits: 1 SINGLY

↓  
COORDINATES – LONGITUDE – LATITUDE: In Raster Based Geographic Information Systems student will gain knowledge and experience in using discrete uniform cells to represent a specific area of the earth for location services.



(AND)

### Cyber Security II

[77721/2A PROG CYBR II 13027700]

Grades: 11 Credits: 1 SINGLY

ANALYZE – DEFEND – SAFETY: In Cyber Security II students will expand their knowledge and skills in structured programming techniques and concepts by addressing complex cyber threats through developing comprehensive programming solutions to prevent cyber-attacks on networks and personal computer workstations. Students analyze the social responsibility of business and industry regarding the significant issues relating to cyber security ethics, health, safety, and diversity in society and in the workplace. Students apply technical skills to address cyber security applications of emerging technologies. Students participate in Cyber Patriot where they test their skills for finding vulnerabilities within operating systems while maintaining critical services.

# 4

✦ **Practicum in Cyber Security**  
**[77741/2A PRACCYBRSEC 13028000]**

Grades: 12                      Credits: 2                      SINGLEY

SKILLS – APPLY – INFORM: In the Cyber Security Practicum students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of products, services, and systems relating to Cyber Security. **This course serves as one of the capstone courses for students completing the Cyber Security pathway. Students will be required to complete a paid, or unpaid off-campus work experience. The type of work and hours assigned will be determined by the instructor. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

**Parent/Student Orientation REQUIRED**

# ROBOTIC MANUFACTURING

STUDENT / PARENT ORIENTATION REQUIRED.

1

## Principles of Robotic Manufacturing [75481/2A PRINROBMAN 13032200]

Grades: 9 Credits: 1 SINGLY

2D – 3D – NIMS: In Principles of Manufacturing students will be introduced to manufacturing – the processing of materials into intermediate or final products. Hand and power tool skills are presented along with shop/machine safety. Students will create 2D products through laser engraving/cutting and 3D products using 3D design software with a 3D printer. Students are expected to earn the first two base NIMS credentials.



(AND)

## Principles of Robotic Engineering [77941/2A PRAPPENG 13036200]

Grades: 9 Credits: 1 SINGLY

DESIGN – PROGRAM – MODEL: In the Principles of Robotic Engineering student will develop an understanding of field of engineering/engineering technology as it relates to the robotic and manufacturing industry. The course also includes essential concepts of technology and design using 3D software, as well as concerns about the social implications of technological change. Students will learn to construct and program basic robots.

2

## Manufacturing Engineering Technology I [77951/2A MANENGT1 13032900]

Grades: 10 Credits: 1 SINGLY

DESIGN – CONTROL – PRODUCE: In Manufacturing Engineering Technology I students will be introduced to continuous manufacturing equipment, sensors, and control. Students will incorporate automatic and robotic equipment into a fully automatic manufacturing line. Students will design a product using computer-aided manufacturing (CAM) software and produce it on a computer numeric control (CNC) machine. Students are expected to earn one of the NIMS CNC Operator credentials.



(AND)

## Robotics I [75671/2A ROBOTIC1 13037000]

Grades: 10 Credits: 1 SINGLY

AUTOMATION – PROTOTYPES – SIMULATION: In Robotics I students will demonstrate knowledge and skills necessary for the robotic and automation industry. Through implementation of the design process, students will transfer advanced academic skills to component designs in a project-based environment. Students will build prototypes and or use simulation software to test their design. Additionally, students explore career opportunities, employer expectations, and education needs in the robotic and automation industry. Students will be provided opportunities to participate in field-based activities, including competitive and collaborative events with industry partners.

3

## ⊕ Manufacturing Engineering Technology II [77961/2A MANENGT2 13032950] [Prerequisite: Manufacturing Engineering Technology I]

Grades: 11 Credits: 1 SINGLY

CNC – CAM – NIMS: In Manufacturing Engineering Technology II student will extend their knowledge and study of manufacturing with more advanced and complex equipment, systems, and processes. Students will continue designing products using computer-aided manufacturing (CAM) software and producing them on computer numeric control (CNC) machines. Students are expected to earn the other NIMS CNC Operator credential.



(AND)

## ⊕ Robotics II [77971/2A ROBOTIC2 13037050]

Grades: 11 Credits: 1 SINGLY

This course supports integration of academic and technical knowledge and skills. Students will have opportunities to reinforce, apply, and transfer knowledge and skills to a variety of settings and problems as well as participate in Robotics competitions. **The type of work and hours assigned will be determined by the instructor. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

# 4

## ✦ **Practicum in Robotic Manufacturing** **[79501/2A PRACROBMAN 13033000]**

Grades: 12                      Credits: 2                      SINGLY

The practicum is designed to give students supervised practical application of previously studied knowledge and skills they have gained in the coherent sequence of courses. Practicum experiences can occur in a variety of locations appropriate to the nature and level of experience. **This course serves as the capstone course for students completing the Robotic Manufacturing pathway. Students will be required to complete a paid, or off-campus unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

**Parent/Student Orientation REQUIRED**

# VIDEO GAME DESIGN

STUDENT / PARENT ORIENTATION REQUIRED.

1

## Video Game Design

[77981/2A VIDGD 13009970]

Grades: 9 Credits: 1 SINGLY

DESIGN – CONSTRUCT – ANIMATE: Students will learn gaming, computerized gaming, evolution of gaming, artistic aspects of perspective, design, animation, technical concepts of collision theory, and programming logic.



2

## Computer Programming I

[78241/2A COMPPRO1VGD 13027600]

Grades: 10 Credits: 1 SINGLY

STRUCTURE – EXECUTABLE – CREATE: In Computer Programming I, students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs such as video games and creating appropriate documentation. Students will practice necessary skills for career development such as professional behavior, team work, and resume/portfolio building. Students will apply technical skills to develop 2D games that are applicable to a variety of emerging technologies.



3

## Computer Programming II

[78451/2A COMPPRO2VGD 13027700]

Grades: 11 Credits: 1 SINGLY

CODING – TEAMWORK - 2D: In Computer Programming I, students will acquire knowledge of structured programming techniques and concepts appropriate to developing executable programs such as video games and creating appropriate documentation. Students will practice necessary skills for career development such as professional behavior, team work, and resume/portfolio building. Students will apply technical skills to develop 2D games that are applicable to a variety of emerging technologies.



4

## Animation II / Lab

[78261/2A ANIMAT2 13008400] – DUAL credit

[78631/2A ANIMAT2 13008400] – Non-dual

Grades: 11-12 Credits: 2 SINGLY

DESIGN – PRODUCE – IMPLEMENT: In Animation II students will gain advanced knowledge and skills in the application, design, production, implementation, maintenance, evaluation, and assessment of video game animation by creating 3D models and animation sequences for inclusion in video games, simulations, and animated shorts.

## Web Technologies

[77991/2A WEBTECHVGD 13027900]

Grades: 9 Credit: 1 SINGLY

CODING – PROGRAMMING – DESIGNING are all part of Web Technologies. Learn how the internet works on code. Join the web technologies class and learn to implement personal and interpersonal skills to prepare you for an evolving workplace environment. Acquire and practice skills that will enable you to successfully perform and interact in a technology-driven job. You will put to use your abilities to read, write compute, communicate, and think when using technology to communicate.



(AND)

## Video Game Design II

[78254A VIDEOGD2 N1300994]

AND

[78644A VIDEOGD3 N1300995]

Grades: 10 Credits: 1 (0.5+0.5) SINGLY

ANIMATE – COLLIDE – LOGIC: Students will learn enhance their ability to create and animate games. Students will participate in a simulation of a real video game design team while developing technical proficiency in constructing an original game design.



(AND)

## Animation I

[76381/2A ANIMAT1 13008300] – DUAL credit

[74231/2A ANIMAT1 13008300] – Non-dual

Grades: 11 Credits: 1 SINGLY

LIGHTING – CAMERA - 3D: In Animation I students will discover the world of animation and aspects of motion graphics. In the course, students will understand the theory and techniques in creating animation used in Video Game design while utilizing appropriate software. Students will create objects in a digital 3-D environment; demonstrate digital lighting and camera operations on constructed objects; edit audio files and image sequences; and explain perspective and dimensions.



(AND)



# SCHOOL OF HEALTH SCIENCE

JACK E. SINGLEY ACADEMY

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✦ identifies a course as ADVANCED.

# HEALTH SCIENCE DUAL CREDIT PATHWAY

## STUDENT / PARENT ORIENTATION REQUIRED.

1

**Medical Terminology I (HITT 1305)**  
**[IISD Medical Terminology]**  
**[78281/2A MEDTERM 13020300] – DUAL credit**

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.



2

✦ **Management, Law and Ethics (HPRS 2231)**  
**[IISD Health Science Theory]**  
**[78291/2A HLTHSCI 13020400] – DUAL credit**  
**[Prerequisites: Principles of Health Science AND Biology]**

Grades: 10 Credits: 1 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations.



(AND)

**Principles of Health Science**  
**[74561/2A PRINHLSC 13020200]**

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the health-care industry. With this background, your future in the healthcare field can begin.



(AND)

✦ **Wellness and Health (HPRS 1202)**  
**[IISD World Health Research]**  
**[78301/2A WORLDHR 13020900] – DUAL credit**  
**[Prerequisites: Biology AND Chemistry]**

Grades: 10 Credits: 1 SINGLEY

This course provides an overview of wellness theory and its application throughout the lifespan with a focus on attitude development, impact of cultural beliefs, and communication of wellness.



(AND)

**Anatomy and Physiology**  
**[35221/2A ANATPHYS 13020600]**

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

3

✳ **Basic Health Profession Skills (HPRS 1204)**  
**[IISD Practicum in Health Science]**  
**[78331/2A PRACHLS1 13020500] – DUAL credit**  
**[Prerequisites: Principles of Health Science AND Health Science Theory AND Biology]**

Grades: 11 Credits: 2 SINGLEY

THE PATIENT NEEDS YOU! It is in a practicum that you are given the practical application to use your knowledge and skills. Your experiences will vary and may include clinical rotations and an internship. You will receive CPR training. You will have the opportunity to your skills to patient care and safety, basic patient monitoring, and health records management.



(AND)

**Biology for Science Majors (BIOL 1406/1407)**  
**[IISD Scientific Research and Design I]**  
**[36161/2A SCIRD DC 13037200] –Dual Credit**

Grades: 11-12 Credits: 1 SINGLEY

This college course will cover principles of living organisms, including physical and chemical properties of life, organization, function, evolutionary adaptation, and classification. Study and examination of the concepts of cytology, reproduction, genetics, and scientific reasoning are included. Laboratory activities will reinforce these concepts. The second semester is an introductory survey of current biological concepts for students majoring in the sciences. The diversity and classification of life will be studied, including animals, plants, protists, fungi, and prokaryotes. Special emphasis will be given to anatomy, physiology, ecology, and evolution of plants and animals. Laboratory activities will reinforce study of these concepts.

OR

✳ **Pharmacology for Health Professionals (HPRS 2300)**  
**[IISD Pharmacology]**  
**[78571/2A PHARMC 13020950] – DUAL credit**  
**[Prerequisites: Biology AND Chemistry]**

Grades: 11 Credits: 1 SINGLEY

I NEED MY PRESCRIPTION FILLED TODAY! Before filling the prescription, you need to study how natural and synthetic chemical agents such as drugs affect biological systems. Your knowledge of the properties of therapeutic agents, drug classifications, actions, adverse effects, routes of administration and calculation of dosages are vital in providing quality health care. There is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers like YOU.

OR

✳ **Pathophysiology (HPRS 2201)**  
**[IISD Pathophysiology]**  
**[35371/2A PATHO 13020800] – DUAL credit**  
**[Prerequisites: Biology AND Chemistry]**

Grades: 11 Credits: 1 SINGLEY

YOU HAVE A DISEASE! Was it preventable? You will conduct field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem-solving study disease processes and how humans are affected. You will learn the value of prevention as well as how to treat diseases while differentiating between normal and abnormal physiology.

4

✳ **Basic Health Profession Skills II (HPRS 2210)**  
**[IISD Practicum in Health Science II]**  
**[78351/2A PRACHLS2 13020510] – DUAL credit**

Grades: 12 Credits: 2 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patients and in a health care facility, working side by side with health care professionals, helping today's patient manage their individual health issues. Through in-class simulation experiences, you will be prepared to perform patient care utilizing critical thinking and advanced clinical skills. **This course serves as the capstone course for students completing the Patient Care Technician pathway. Students will be required to complete a paid, or unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students are required to take a criminal background test and drug screening which the district will pay for. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**



(AND)

**Anat and Physiology (BIOL 2401/2402)**  
**[IISD Scientific Research and Design II]**  
**[36241/2A SCIRD2 13037210] – DUAL credit**

Grades: 12 Credits: 1 SINGLEY

This course is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

# PATIENT CARE TECHNICIAN

STUDENT / PARENT ORIENTATION REQUIRED.

1

**Principles of Health Science**  
[74561/2A PRINHLSC 13020200]

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. With this background, your future in the healthcare field can begin.



2

**Health Science Theory**  
[74581/2A HLTHSCI 13020400]  
[Prerequisites: Principles of Health Science AND Biology]

Grades: 10 Credits: 1 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations.



3

**\* Practicum in Health Science**  
[78321/2A PRACHLS1 13020500]  
[Prerequisites: Principles of Health Science AND Health Science Theory AND Biology]

Grades: 11 Credits: 2 SINGLEY

THE PATIENT NEEDS YOU! It is in a practicum that you are given the practical application to use your knowledge and skills. Your experiences will vary and may include clinical rotations and an internship. You will receive CPR training. You will have the opportunity to your skills to patient care and safety, basic patient monitoring, and health records management.



4

**\* Practicum in Health Science II**  
[74961/2A PRACHLS2 13020510]  
[Prerequisite: Practicum in Health Science]

Grades: 12 Credits: 2 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patients and in a health care facility, working side by side with health care professionals, helping today's patient manage their individual health issues. Through in-class simulation experiences, you will be prepared to perform patient care utilizing critical thinking and advanced clinical skills. **This course serves as the capstone course for students completing the Patient Care Technician pathway. Students will be required to complete a paid, or off-campus unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students are required to take a criminal background test and drug screening which the district will pay for. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

**Parent/Student Orientation REQUIRED**

**Medical Terminology**  
[74571/2A MEDTERM 13020300]

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.



(AND)

**Anatomy and Physiology**  
[35221/2A ANATPHYS 13020600]

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.



(AND)

# PHARMACY TECHNICIAN

STUDENT / PARENT ORIENTATION REQUIRED.

1

## Principles of Health Science [74561/2A PRINHLSC 13020200]

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. With this background, your future in the healthcare field can begin.



(AND)

## Medical Terminology [74571/2A MEDTERM 13020300]

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.

2

## Health Science Theory [74581/2A HLTHSCI 13020400] [Prerequisites: Principles of Health Science AND Biology]

Grades: 10 Credits: 1 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations.



(AND)

## Anatomy and Physiology [35221/2A ANATPHYS 13020600]

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

3

## \* Pharmacology [78371/2A PHARMC 13020950] [Prerequisites: Biology AND Chemistry]

Grades: 11 Credits: 1 SINGLEY

I NEED MY PRESCRIPTION FILLED TODAY! Before filling the prescription, you need to study how natural and synthetic chemical agents such as drugs affect biological systems. Your knowledge of the properties of therapeutic agents, drug classifications, actions, adverse effects, routes of administration and calculation of dosages are vital in providing quality health care. There is an ever-changing, growing body of information that continually demands greater amounts of time and education from health care workers like YOU.



(AND)

## \* Pathophysiology [36141/2A PATHO 13020800] [Prerequisites: Biology AND Chemistry]

Grades: 11 Credits: 1 SINGLEY

YOU HAVE A DISEASE! Was it preventable? You will conduct field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem-solving study disease processes and how humans are affected. You will learn the value of prevention as well as how to treat diseases while differentiating between normal and abnormal physiology.

4

## \* Practicum in Health Science (Pharmacy Tech) [74971/2A PRACPHARMTECH 13020500]

Grades: 12 Credits: 2 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patient prescription needs, working side by side with health care professionals, helping today's patient manage their individual health issues. **This course serves as the capstone course for students completing the Pharmacy Technician program of pathway. Students will be required to complete a paid, or off-campus unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students are required to take a criminal background check and drug screening which the district will pay for. Students will be required to provide their own transportation to and from work.**

Parent/Student Orientation REQUIRED

# DENTAL

## STUDENT / PARENT ORIENTATION REQUIRED.

1

**Principles of Health Science**  
[74561/2A PRINHLSC 13020200]

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. With this background, your future in the healthcare field can begin.



(AND)

**Medical Terminology**  
[74571/2A MEDTERM 13020300]

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.

2

**Health Science Theory (Dental) / Health Science Clinical**

[78391/2A HLSCLIN 13020410]

[Prerequisites: Principles of Health Science AND Biology]

Grades: 10 Credits: 2 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations associated with the dental field.



**Anatomy and Physiology**  
[35221/2A ANATPHYS 13020600]

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

3

**\* Practicum in Health Science**

[74631/2A PRACHLS1DENTAL 13020500]

[Prerequisites: Principles of Health Science AND Health Science Theory AND Biology]

Grades: 11 Credits: 2 SINGLEY

THE PATIENT NEEDS YOU! It is in a practicum that you are given the practical application to use your knowledge and skills. Your experiences will vary and may include clinical rotations and an internship. You will receive CPR training. You will have the opportunity to your skills to patient care and safety, basic patient monitoring, and health records management.



4

**\* Practicum in Health Science II (Dental)**

[74511/2A PRACHLS2DENTAL 13020510]

[Prerequisites: Practicum in Health Science]

Grades: 12 Credits: 2 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patients and in a health care facility, working side by side with health care professionals, helping today's patient manage their individual health issues. **This course serves as the capstone course for students completing the Dental pathway. Students will be required to complete a paid, or off-campus unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**

**Parent/Student Orientation REQUIRED**

OR

**\* Practicum in Health Science II (Dental) / Extended**

[78551/2A EXPRHLS2DENTAL 13020515]

Grade: 12 Credits: 3 SINGLEY

*Should your schedule permit, you may acquire an additional credit for this course and spend additional time at your approved practicum.*

# EMERGENCY MEDICAL TECHNICIAN

## STUDENT / PARENT ORIENTATION REQUIRED.

1

**Principles of Health Science**  
**[74561/2A PRINHLSC 13020200]**

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. With this background, your future in the healthcare field can begin.



(AND)

**Medical Terminology**  
**[74571/2A MEDTERM 13020300]**

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.

2

**Health Science Theory**  
**[74581/2A HLTHSCI 13020400]**  
**[Prerequisites: Principles of Health Science AND Biology]**

Grades: 10 Credits: 1 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations.



(AND)

**Anatomy and Physiology**  
**[35221/2A ANATPHYS 13020600]**

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

3

**Practicum in Health Science (EMT)**  
**[78411/2A PRACHLS1EMT 13020500]**  
**[Prerequisites: Principles of Health Science AND Health Science Theory AND Biology]**

Grades: 11 Credits: 2 SINGLEY

THE PATIENT NEEDS YOU! It is in a practicum that you are given the practical application to use your knowledge and skills. Your experiences will vary and may include clinical rotations and an internship. You will receive CPR training. You will have the opportunity to your skills to patient care and safety, basic patient monitoring, and health records management.



(AND)

**Biology for Science Majors (BIOL 1406/1407)**  
**[IISD Scientific Research and Design I]**  
**[36161/2A SCIRD DC 13037200] –Dual Credit**

Grades: 11-12 Credits: 1 SINGLEY

4

**Practicum in Health Science II (EMT)**  
**[78421/2A EXPRHLS1EMT D/C 13020505] – DUAL credit**  
**[Prerequisite: Application Process/ students must be enrolled in Health Science or Firefighter pathway]**

Grades: 12 Credits: 3 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patients and in a health care facility, working side by side with health care professionals, helping today's patient manage their individual health issues. **This course serves as the capstone course for students completing the Emergency Medical Technician pathway. Students will be required to complete a paid, or unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students are required to have a criminal background check and drug screening, which the district will pay for. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**



(AND)

**Anat and Physiology (BIOL 2401/2402)**  
**[IISD Scientific Research and Design II]**  
**[36241/2A SCIRD2 13037210] – DUAL credit**

Grades: 12 Credits: 1 SINGLEY

This course is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

**Parent/Student Orientation REQUIRED**

# Sports Rehabilitation

STUDENT / PARENT ORIENTATION REQUIRED.

1

**Principles of Health Science**  
[74561/2A PRINHLSC 13020200]

Grades: 9 Credits: 1 SINGLEY

HOW DO YOU FEEL TODAY? To begin your pathway to a career in health science, you need an overview of the therapeutic, diagnostic, health informatics, support services, and biotechnology research and development systems of the healthcare industry. With this background, your future in the healthcare field can begin.



(AND)

**Medical Terminology**  
[74571/2A MEDTERM 13020300]

Grades: 9 Credits: 1 SINGLEY

LET'S TALK MEDICAL! In this course, you will achieve comprehension of medical vocabulary appropriate to medical procedures, human anatomy and physiology, and pathophysiology, including word origin and structure through the introduction of prefixes, suffixes, root words, plurals, abbreviations and symbols, surgical procedures, medical specialties, and diagnostic procedures. In order to talk to medical professionals, you have to know the language.

2

**Health Science Theory**  
[74581/2A HLTHSCI 13020400]  
[Prerequisites: Principles of Health Science AND Biology]

Grades: 10 Credits: 1 SINGLEY

This course will cover the exploration and application of management concepts necessary for effective health profession operations.



(AND)

**Anatomy and Physiology**  
[35221/2A ANATPHYS 13020600]

Grades: 10 Credits: 1 SINGLEY

This course is designed for students to conduct laboratory and field investigations, use scientific methods during investigations, and make informed decisions using critical thinking and scientific problem solving. Students in Anatomy and Physiology will study a variety of topics, including the structure and function of the human body and the interaction of body systems for maintaining homeostasis.

3

**Practicum in Health Science (Trainer)**  
[74611/2A PRACHLS1TRAINER 13020500]  
[Prerequisites: Principles of Health Science AND Health Science Theory AND Biology]

Grades: 11 Credits: 2 SINGLEY

THE PATIENT NEEDS YOU! It is in a practicum that you are given the practical application to use your knowledge and skills. Your experiences will vary and may include clinical rotations and an internship. You will receive CPR training. You will have the opportunity to your skills to patient care and safety, basic patient monitoring, and health records management.



(AND)

**Biology for Science Majors (BIOL 1406/1407)**  
[IISD Scientific Research and Design I]  
[36161/2A SCIRD DC 13037200] –Dual Credit

Grades: 11-12 Credits: 1 SINGLEY

4

**Practicum in Health Science II**  
[74961/2A PRACHLS2 13020510]  
[Prerequisite: Practicum in Health Science]

Grades: 12 Credits: 2 SINGLEY

THE TIME HAS COME! You will have practical applications of knowledge and skills, dealing directly with patients and in a health care facility, working side by side with health care professionals, helping today's patient manage their individual health issues. Through in-class simulation experiences, you will be prepared to perform patient care. **This course serves as the capstone course for students completing the Sports Rehabilitation pathway. Students will be required to complete a paid, or unpaid work experience. The type of work and hours assigned will be determined by the instructor. Students are required to take a criminal background test and drug screening which the district will pay for. Students must have an assigned practicum within 10 days of enrollment and all required paperwork must be signed by parents and submitted within 10 days of enrollment. Students will be required to provide their own transportation to and from work.**



(AND)

**Anat and Physiology (BIOL 2401/2402)**  
[IISD Scientific Research and Design II]  
[36241/2A SCIRD2 13037210] – DUAL Credit

Grades: 11-12 Credits: 1 SINGLEY

This course is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.