School Board Meeting: **November 28, 2016**

Subject: **BHS Course Proposals 2017-18**

Presenter: **Pam Miller & Mark Mischke**

SUGGESTED SCHOOL BOARD ACTION:

No recommended action at this time. Action will be taken at the December 12, 2016 school board meeting.

DESCRIPTION:

New course proposals and course modifications have been solicited and developed for the 2016-2017 school year. The district's course proposal process begins in October and ends with school board approval in December. Once approval for course changes are given, the course information is included in the registration and scheduling process for the secondary schools.

Overview of the Course Proposal Process

The course proposal process includes a series of steps to ensure that all perspectives of possible implications of the addition or modification of each proposed course have been considered. The following information is communicated to teachers as they consider submitting a proposal.

- The Director of Teaching & Learning may reject or recommend redesign of a course proposal at any time in the process.
- Incomplete proposals will not be processed.
- Course proposal recommendations are required from the following groups or individuals prior to being brought to the School Board for approval:
    - Department Chairperson
    - Site Principal
    - Site Teaching and Learning Council
    - District Teaching and Learning Council
    - Community Teaching and Learning Council

- Courses that do not receive sufficient student requests will not be offered next year, but may remain in the registration book as an option for the following school year.
- Course approval does not guarantee implementation. Implementation is dependent on resources and scheduling considerations. Feasibility of implementation is determined by the site principal.

The course proposals included here are in the process of review under the following timeline:

BHS Department Chairs on October 25, 2016
District Teaching & Learning Council on November 3, 2016
Community Teaching & Learning Council on November 4, 2016
School Board Meeting – Course Proposal Review on November 28, 2016
School Board Meeting – Course Proposal Approval on December 12, 2016

All course proposals recommended to move forward will be presented to the School Board for approval. Each individual or group was asked to use the following criteria in formulating a recommendation for each course.

Criteria to Consider

- *Evidence of student need or parent/community demand*
- *Graduation requirement impact*
- *District goals match*
- *Program rationale match*
- *Program standards alignment*
- *Post-secondary impact*
- *Cost and/or resource availability*
- *Impact on other buildings*
- *Overlap with other courses*
- *Match of content and course length*
- *Efficiency in utilization of space and personnel*

BHS Course Proposals

A total of 28 courses were proposed for consideration. Each of the proposals were reviewed by Mark Mischke, BHS Principal, and Pam Miller, Director of Teaching & Learning.

Of the 28 course proposals, 21 of those are being presented for your consideration; 6 courses are proposed for deletion; 4 courses are proposed as course modifications of existing courses; and 12 new courses are proposed. The remaining 6 course proposals have been placed on hold for consideration in the future. The course names are listed on the following page, and detailed course proposal information for each proposal is included as an additional attachment.

At the December 12 board meeting, I will recommend approval for each course proposal presented, and for all approved course proposals to be added to Buffalo High School courses as additional opportunities for students.

Each course approved for implementation in 2017-2018 will be allotted curriculum development hours if needed. These hours are under the direction of the Department of Teaching and Learning, and will be completed during the summer months.

BHS Course Proposals for 2017-2018

10/25/2016 BHS Course Proposal Mtg	Course	Name of Faculty that submitted	Department	Comments
Deletions	Personal & Family Issues 1	J. Mundahl	FACS	Ok
	Personal & Family Issues 2	J. Mundahl	FACS	Ok
	Creating Interior Spaces	J. Mundahl	FACS	Ok
	Fashion Design	J. Mundahl	FACS	Ok
	Meteorology	M. Morris	Science	Ok
	Advanced Biology	D. Schneider & J. Sheedy	Science	Ok
Modifications	Astronomy	M. Morris	Science	Ok
	Technology Exploration	T. Hanson	Tech Ed	Ok
	Intro to Agriculture	G. Wirkus	Ag	Ok
	CIS Marketing	M. Tuchscherer	Business Ed	Ok
Additions	Earth Science A	M. Morris	Science	Ok
	Earth Science B	M. Morris	Science	Ok
	Arts Infused Forensic Science	T. Johnson	Science	Ok
	CIS Biology	D. Schneider & J. Sheedy	Science	Ok
	AI Science 9	T. Johnson	Science	Ok

	Algebra 3 w/Trig	M. Bauman	Math	Ok
	AP Computer Science A	J. Peterson & D. Kilgore	Math	Ok
	Robotics 2	T. Hanson & B. Wandmacher	Tech Ed	Ok
	CIS World History	C. Gmach & T. Rosh	Social Studies	Ok
	CIS Intro to Gerontology	J. Mundahl	FACS	Ok - Partnership-SCSU
	CIS Personal Finance Planning - NH Bus 1440	B. Diekman & J. Mundahl	Business Ed & FACS	Ok - NHCC 10-12
	Integrated Economics & Personal Finance	B.Diekman & B. Bergquist	Business & Social Studies	Ok
Proposals Submitted But On Hold	Personal Financial Management	J. Mundahl	FACS	Will stay in book 10-12
	CIS Ceramics	J. Holtz	Art	Hold - 2018-19 partner-TBD
	CIS Concert Band	S. Rabehl	Music	Hold-NHCC questions 2018-19
	CIS Concert Orchestra	M. Knutson	Music	Hold-NHCC questions 2018-19
	CIS Concert Choir	M. Walsh	Music	Hold-NHCC questions 2018-19
	CIS Teacher Cadet Program	J. Mundahl	FACS	Hold - MDE questions - 2018-19

COURSE DELETIONS

Course Titles:	**Department:**
Personal and Family Issues 1	FACS
Personal and Family Issues 2	
Creating Interior Spaces	
Fashion Design	

Rationale for Proposal:
Lack of student interest/enrollment in courses. These courses have not been offered for several years due to lack of student interest in the registration process.

Course Title:	**Department:**
Meteorology	Science

Rationale for Proposal:
This course typically has had few enrollment numbers in recent years. The majority of students would be better served taking a general Earth Science course. The meteorology standards will be included in the new Earth Science classes.

Course Titles:	**Department:**
Advanced Biology	Science

Rationale for Proposal:
Propose to remove the Advanced Biology from the high school curriculum upon approval of the addition of the CIS Biology course and an agreement with a college partner for the CIS Biology course. The Advanced Biology would then be a redundant course offering.

COURSE MODIFICATIONS

Course Title: Astronomy
Department: Science

Rationale for Proposal:
Modification of the current astronomy course is proposed. The course will continue to meet current state and national standards in astronomy. This course would focus on current topics in astronomy and introduce the students to college level astronomy and astrophysics. Recently students have indicated an interest in a course that is more challenging and focused on current research in astronomy.

Course Title: Technology Exploration
Department: Tech Ed

Rationale for Proposal:
The current curriculum and technology is over ten years old. The new curriculum will support several standards in the areas of design and technological processes.

Course Title: Intro to Agriculture
Department: Ag

Rationale for Proposal:
Propose to change the current course of *Plants, Animals, and You (PAY)* to *Introduction to Agriculture*.

Course Title: CIS Business
Department: Business

Rationale for Proposal:
Propose to change the course name from CIS Marketing to CIS Business. The concurrent enrollment partner is SCSU. At SCSU the course is coded as MKTG 100 and is named Contemporary Business Concepts. Although marketing is addressed in this course, it is simply just one of the four units included. CIS Business is a more appropriate name for this course.

COURSE ADDITIONS

Course Title: Earth Science A

Department: Science

Rationale for Proposal:

This course is needed because (1) it will include instruction on state standards that currently are not taught to the extent intended and (2) it provides a course that is accessible to all students while maintaining a proper level of rigor. Currently earth science standards are loosely embedded in other core science courses. This course will also give students an opportunity to explore topics in physical geology, which currently is not an option. This course would be primarily targeting students who choose to take a basic chemistry or physics class and are needing an additional ½ credit science course to meet the graduation requirements. Earth Science A will focus on physical geology. Earth Science A is independent from Earth Science B. A student does not need to complete both courses to earn science credit.

Course Title: Earth Science B

Department: Science

Rationale for Proposal:

This course is needed because (1) it will include instruction on state standards that currently are not taught to the extent intended and (2) it provides a course that is accessible to all students while maintaining a proper level of rigor. Currently earth science standards are loosely embedded in other core science courses. Earth Science B is focused on offering a class that is more accessible to all students compared to our current meteorology and astronomy course. The course will focus on large concepts and give students a general background on both subject areas. The mathematics, a common hurdle in the current courses, will be reduced or simplified so that the course is more accessible. While meteorology and astronomy standards are currently offered, they are taught as a high standard as the course title would imply. Earth Science B would allow for a conceptual approach while reflecting the expected rigor of the course. Earth Science B will focus on astronomy and meteorology. Earth Science B is independent from Earth Science A. A student does not need to take Earth Science A prior to B.

Course Title: Arts Infused Forensic Science

Department: Science

Rationale for Proposal:

The desire to observe and understand the natural world is strong in young children, but high school students often consider science irrelevant to their daily lives. Therefore, as teachers of older age groups, we constantly struggle to engage students in scientific exploration so they can master concepts and appreciate the nature of science. By providing an air of mystery and glamour, forensic science engages even reluctant students in the scientific process and helps them think like scientists about authentic problems, one of the ultimate goals of science education.

The natural fit with Arts Magnet is that Forensic Science is interdisciplinary. We can look at Forensic Science through all aspects of STEAM - the scientific lab work, the technological and digital advances used, the solving of real-world cases and problems, the film/photography/literature/visual art applications, and the mathematics of calculating probability and measurement of evidence.

Recent student surveys have reflected this course as a top pick for an elective. In addition, Arts Magnet seniors have no elective courses available to them within the Arts Magnet umbrella other than "Capstone" and have asked for more.

If successful in the Arts Magnet program, the course would be offered to the general student body as well.

Standards Included:

- Nature of Science - Scientific ideas change over time
- Nature of Science - Scientific Method
- Lab Technique - microscopes
- Lab Technique - chemical indicators
- Discussion & Problem Solving: fingerprint matching accuracy and privacy
- Mixtures, Solutions, Solubility, Evaporation
- Literacy/Writing in science
- Acid/Base Chemistry
- Algebra: solving for height from bone length analysis

- Algebra: solving for time of death based on insect life cycles
- Review of DNA structure, mutations (Biology)
- Restriction enzymes and electrophoresis
- Analysis and Discussion of bioethics and DNA data privacy
- True Crime Investigation - science literacy, analysis of technical text, research and citing sources
- Refraction (physics standard), Cleavage (earth science standard)
- Problem-solving, calculations of pressure, calculations of frequency, stride, and probability
- Evaporation, chemical formulas, balancing chemical equations
- Calculating temperature and pressure
- Creation and analysis of digital sound fingerprint
- Research project presented in creative way to link to art component (STEAM)

Course Title:	**Department:**
CIS Biology	Science

Rationale for Proposal:

Currently, BHS offers Advanced Biology, with an opportunity to take the AP exam upon completion. This is currently a three-term course. Students are increasingly finding it difficult to schedule three term courses to prepare for AP exams. Switching to a CIS Biology course would provide students the opportunity to receive college credit from the concurrent enrollment partner and would be able to do this in a two-term course. The course offering that is being explored matches closely with the standards required for the state required General Biology. Quest students should be able to meet the state standards and be prepared for the MCA Science exam.

Course Title:	**Department:**
Arts Infused 9 (AI) Science 9	Science

Rationale for Proposal:

In 2015, the *AI Physics 9* course was deleted because the content did not match that of the general required Physical Science 9, and the math involved was proving to be at too high of a level for many of the Arts Magnet students. After seeing the results in the 2015-2016 school year, a need has been identified to still offer a 9th grade Arts Infused Science course, but one that parallels the content of the general required Physical Science 9

curriculum. Last year's Arts Magnet ninth graders felt that they missed an opportunity to be truly "school within a school" when their science class was outside the Arts Infused umbrella. They also lost the opportunity to pursue artistic inquiry in core subject areas, which has affected their work in sophomore Biology as well. The plan is to mimic/parallel the current 9th grade curriculum, with the addition of Artistic Inquiry and Art Infused lessons in every unit. In this way, all of the 9th Grade Physical Science standards are included. This will better prepare students to be successful in Chemistry.

Course Title:	**Department:**
Algebra 3 with Trigonometry	Math

Rationale for Proposal:

Algebra 3 with Trigonometry is a course intended for students who have completed Geometry and Algebra 2. It is recommended for juniors or seniors who wish to strengthen their essential algebra and basic trigonometry skills in preparation for taking Pre-Calculus in high school, or are college-bound and wish to prepare for college algebra. This course will enhance the higher level thinking skills developed in Algebra 2 in addition to introducing pre-calculus concepts, such as logarithms. Students will benefit from this additional exploration and mastery of Algebra 2 by preparing them for the next-level mathematics course. The Geometry course explores right triangle trigonometry; in comparison, this course will explore non-right triangle trigonometry concepts such as radian measure and sinusoidal graphs. Applications commonly found in the standardized ACT test will also be explored.

Course Title:	**Department:**
AP Computer Science A	Math

Rationale for Proposal:

This course benefits students by giving them an introduction into computer science, and the opportunity for college credit. Computer science is a rapidly growing field that presents college graduates and non-college graduates alike with many career opportunities. Students may select to enroll in this course for a number of reasons; they can receive college credit, it is a rigorous introduction to programming, it enriches many students' interest areas of computers, games, and software, and it is another math class for students to take after the required courses.

Course Title: Robotics 2

Department: Tech Ed

Rationale for Proposal:

The curriculum we received with our robotics kits is significantly more than can be included in a one-term course. This course would allow students an opportunity to receive instruction in all facets of robotics. This includes making full utilization of all of the components of the robotics kits and programming higher end functions with the EasyC software. This will support the ITEEA standard relating to Engineering and Design. The current Robotics course is very popular and over 100 students registered for this new course in its first year. Based on observations from the first class, students seem to enjoy it and are learning a lot. There is a perceived interest for students to continue with Robotics 2.

Course Title: CIS World History

Department: Social Studies

Rationale for Proposal:

World Studies is a required course for a BHM diploma. This course would offer juniors a higher level world history option that would allow students to enroll in this course instead of our general world history course. Students have indicated interest in an AP or CIS option in World Studies.

Course Title: CIS Intro to Gerontology

Department: FACS

Rationale for Proposal:

This course would be a partnership with St. Cloud State University for concurrent enrollment credit (GERO 208 Introduction to Gerontology-St. Cloud State). Over the past few years, FACS Advisory Committee members, particularly those from Park View and Lake Ridge Care Centers, have informed us about the rapidly increasing aging population and that our students have numerous career options in the field of aging:

- Over the next decade, we will need another 25,000 professional caregivers in Minnesota, in large part to care for our rapidly growing senior population.
- 60,000 Minnesotans will turn 65 every year through 2030.

- Around 2020, Minnesota's 65+ population is expected to surpass the 5-17 school-age population for the first time.
- By 2030, 25% of Minnesotans will be 65 or older.
- By 2030, one in five Americans will be 65 or older and nearly 73 million senior women and men will require advice, training, services and support from professionals who have gerontology skills and knowledge.

That means jobs for our students. Career paths include, but are not limited to, public policy, social services, health care, housing, recreation, transportation, business and education. This course can give students a background and understanding of elderly people, and how to work with the families of individuals with dementia and Alzheimers. Another aspect is the act of aging and changes the body goes through until the individual dies, as well as the introduction of Hospice services. St. Cloud State offers a minor and a masters in Gerontology. A minor in gerontology complements majors such as nursing, social work, community health, counseling, psychology, sociology, communication sciences & disorders, community development, communication studies and business.

Course Title:	**Department:**
CIS Personal Finance Planning	FACS

Rationale for Proposal:

This course would be aligned with North Hennepin Community College to offer concurrent enrollment credit. National and Minnesota personal finance standards in Business Education, FACS, and Social Studies would be included. The current student interest in personal finance has been strong.

Course Outline:

- Goals & financial planning
- Inflation and time value of money
- Taxes
- Compounding interest
- Fundamentals of good cash management
- Credit
- Investing (concentrate on stocks and mutual funds)
- Car buying
- Housing alternatives (renting vs. buying)
- Insurance

Course Title:
Integrated Econ/Personal Finance

Department:
Business & Social Studies

Rationale for Proposal:

Current Minnesota state Economics standards include personal finance standards. Several students choose to take the Personal Finance elective but end up with an overlap of content in Economics. Combining the two would allow those interested in taking both to explore each with more depth, with opportunities for an interdisciplinary approach to concepts. This course would be a dual-registered course on an A/B day rotation with the two instructors.