

## COMPUTER DEPARTMENT

### SEQUENCE

<b>GRADE 9</b>	INTRODUCTION TO APPLICATIONS	SEMESTER	DAILY	ELECTIVE
	HYPERMEDIA	SEMESTER	DAILY	ELECTIVE
<b>GRADE 10</b>	INTRODUCTION TO APPLICATIONS	SEMESTER	DAILY	ELECTIVE
	HYPERMEDIA	SEMESTER	DAILY	ELECTIVE
<b>GRADE 11</b>	INTRODUCTION TO APPLICATIONS	SEMESTER	DAILY	ELECTIVE
	HYPERMEDIA	SEMESTER	DAILY	ELECTIVE
	COMPUTER APPLICATION (NICC CREDIT)	SEMESTER	DAILY	ELECTIVE
<b>GRADE 12</b>	INTRODUCTION TO APPLICATIONS	SEMESTER	DAILY	ELECTIVE
	HYPERMEDIA	SEMESTER	DAILY	ELECTIVE
	COMPUTER APPLICATION (NICC CREDIT)	SEMESTER	DAILY	ELECTIVE

#### **COURSES with a strong technology component:**

Graphic Design  
Digital Photography  
Introduction to Engineering  
Principles of Engineering  
Computer Integrated Manufacturing  
Written Communications  
Accounting 2

## **COMPUTER DEPARTMENT**

### **PHILOSOPHY**

Students completing computer courses at Beckman High School will utilize skills to employ technology as “tools for learning” across the curriculum proficiently and ethically.

### **STANDARDS**

THE STUDENT WILL:

- 1) Know the characteristics and uses of computer hardware and operating systems.
- 2) Know the characteristics and uses of computer software programs.
- 3) Understand the relationships among science, technology, society and the individual.
- 4) Understand the nature of technological design.
- 5) Understand the nature and operation of systems.
- 6) Students will use technology in ways consistent with the Catholic ethics.

### **CAREERS IN THE COMPUTER FIELD**

Computer Engineer  
Computer Equipment Repairer  
Computer Operator  
Computer Programmer  
Computer Programmer, Numerical, Tool and Process Control  
Computer Security Specialist  
Computer System Specialist  
Computer Systems Analyst  
Computer Systems Officer  
Computer- Aided Design Technician  
Computer technical support  
Database Development  
Web Design and development  
Graphic design  
Computer Networking  
Computer Information Systems  
Computer Drafting  
Robotics

NUMBER: 461

TITLE: INTRODUCTION TO APPLICATIONS

GRADE(S): 9,10,11,12

DAYS: DAILY

LENGTH: SEMESTER

CREDIT: 5 per semester

ELECTIVE

**COURSE SUMMARY:** The student will:

1. Manipulate a variety of software programs(tools).
2. Research and compare the stages and generations (history) of computers.
3. Gather, organize, and express information using a variety of software tools.
4. Apply problem-solving skills involving computer technology.
5. Incorporate tools into other curricular environments of their choice.
6. Create and develop an appropriate project demonstrating knowledge of each tool studied using a provided rubric.
7. Timed writings.

This course offers an introduction to computer usage. It will examine the most common forms of software tools, including word processing, data base, spreadsheet, telecommunications (including internet and e-mail), desktop publishing, presentation software, digital cameras, movie and photo editing and graphic design programs, and more. The course will also discuss computer history, terminology, and ethics. Students will be expected to complete projects of interest to them using each of the tools studied above. Comparisons will be made between Mac and Windows computer systems. Appropriate class time will be made available for the completion of projects.

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NUMBER: 462

TITLE: COMPUTER APPLICATION NICC

GRADE(S): 11,12

DAYS: DAILY

LENGTH: SEMESTER

CREDIT: 5 per semester  
NICC COLLEGE CREDIT  
OF 3 SEM HOURS

ELECTIVE

**COURSE SUMMARY:** The student will:

1. Interact with a software application package for the purpose of manipulating spreadsheet data.
2. Interact with a software application package for the purpose of manipulating database information.
3. Interact with a software application for the purpose of producing business graphics.
4. Interact with a software application for the purpose of entering word processing documents.
5. Discuss information relating to various topics covering application software, hardware considerations, operating system software, implementation issues, and networks.

This course presents an overview of data processing concepts through hands-on exercises. Experience is gained by working through progressively challenging exercises using business application software. Practical use of spreadsheet, word processing, database, and graphic programs and the integration of these are stressed. Purchasing guidelines for software selection and the impact of hardware system are discussed. Outside classroom work will be required.

**GUIDELINE:** Must take ACCUPLACER test (College Placement Exam).

NUMBER: 472

TITLE: **HYPERMEDIA &  
WEB CONSTRUCTION**

GRADE(S): 9,10,11,12

DAYS: DAILY

LENGTH: SEMESTER

CREDIT: 5 per semester

ELECTIVE

**COURSE SUMMARY:** The student will:

1. Utilize authoring language to create multimedia and hypermedia programs.
2. Manipulate fields, tools, graphics and scripting options.
3. Produce animation and sound as well as graphics to add highlights to projects.
4. Use HTML based and web based software to develop an individual home page and including appropriate graphics and hyperlinks of the student's choosing, and maintain the school website.
5. Apply problem-solving skills involving hypermedia technology.
6. Incorporate tools into other curricular environments of their choice.
7. Create and develop an appropriate project demonstrating knowledge of each tool studied using a provided rubric.
8. Use various source telecommunication tools including e-mail, wiki's, and blogs to collaborate with instructor, classmates and webpage supervisors.

Students will use HyperMedia to create multimedia and hypermedia projects including webpages, wiki's, and web logs using techniques discussed in class. Students will learn HTML commands and use an HTML editor that will allow them to create a home page that can be used with the Internet providing graphics and hyperlinks. The course will be mainly taught on Mac computers, but comparisons between Mac and Window computer systems will be made.