Superintendent File: IGA-E-3

DCSD ADVANCED PLACEMENT (AP) / INTERNATIONAL BACCALAUREATE (IB)
COURSE PROPOSAL FORM

The completed course proposal must be submitted to the Director of Academic Systems by September 1st. AP/IB course proposals will only be presented to the Board of Education during the October meeting.
Note: You must have a fully executed Course Proposal Inquiry on file before completing this form.

- The Academic Systems team will share a copy of this document titled "Course Proposal [Course title]" with the requestor(s).
- The requestor will need to complete sections:
  - **SECTION I: CONTACT INFORMATION**
  - **SECTION II: COURSE INFORMATION**
  - **SECTION III: COURSE CONTENT**
  - **SECTION IV: IMPLEMENTATION NEEDS**
  - **SECTION V: FINANCIAL NEEDS**

SECTION I: CONTACT INFORMATION

Group(s) initiating this proposal: *(check all that apply)*:

- ☑ Teachers
- ☑ Administrators
- ☐ Students
- ☐ Citizens

School sponsoring this proposal: Mountain Vista High School

Level of School:

- ☐ Elementary
- ☐ Middle
- ☑ High

Contact Information of the individual completing the course proposal:

Name:	Marta McGovern
Phone Number:	303-387-1515
Email Address:	mmcgovern@dcsdk12.org

SECTION II: COURSE INFORMATION

Course Title: AP CK Cyber: Security

Credit Type Earned:

- ☑ Advanced Placement (AP)
- ☐ International Baccalaureate (IB)

Department in which this course is assigned.
(*Department designation is used for state coding & influences the highly qualified teacher status)*

Tech

Credit Amount Earned:

- ☐ 0.25 (Quarter)
- ☐ 0.50 (One Semester)
- ☑ 1.00 (Full Year Course)
- ☐ 0.00 No Credit will be earned

Credit Type Earned:

- ☐ English *(Core)*
- ☐ Math *(Core)*
- ☐ Science *(Core)*
- ☐ Social Studies *(Core)*
- ☐ Practical Art
- ☐ Fine Art
- ☑ Elective
- ☐ Other: Specify

SECTION III: COURSE CONTENT

A. Provide the course description from AP or International Baccalaureate® (IB) for inclusion in the District's course master. The description should give an overview of the main concepts and topics covered in the course, as well as the skills students will develop. This information should be clear for parents, students, the public, and administrators.

This is a full-year course covering foundational cybersecurity concepts and skills and is equivalent to a college-level Introduction to Cybersecurity course. Students will explore the current cyber threat landscape to understand the types of adversaries organizations face and the techniques adversaries use to compromise systems and data. Students will learn how vulnerabilities create risk and how organizations implement security controls to manage that risk. Topics in the course include physical, operational, application, and network security; security controls; cryptography; access control; attacks and detection; and response and recovery. Students will research emerging trends in cybersecurity and gain hands-on experience implementing security protocols.

B. Provide the official course overview published by AP or International Baccalaureate® (IB).

Course Content Overview – Units / Topics
https://drive.google.com/file/d/1W2CmsJ1vgsqJqTdtN89FHbTXwXrqi0oJ/view

Unit 1: Developing a Cyber Mindset
1.1 Understanding Adversaries
1.2 Managing Risk
1.3 Defense in Depth

Unit 2: Securing Physical Spaces
2.1 Physical Vulnerabilities and Attacks
2.2 Protecting Physical Spaces
2.3 Detecting Physical Attacks

Unit 3: Securing Networks
3.1 Network Vulnerabilities and Attacks
3.2 Protecting Networks: Managerial Controls and Wireless Security
3.3 Protecting Networks: Firewalls
3.4 Protecting Networks: Segmentation
3.5 Detecting Network Attacks

Unit 4: Securing Devices
4.1 Device Vulnerabilities and Attacks

4.2 Authentication
4.3 Protecting Devices
4.4 Detecting Attacks on Devices

Unit 5: Securing Applications and Data
5.1 Application and Data Vulnerabilities and Attacks
5.2 Protecting Applications and Data: Managerial Controls and Access Controls
5.3 Protecting Stored Data with Cryptography
5.4 Asymmetric Cryptography
5.5 Protecting Applications
5.6 Detecting Attacks on Applications and Data

C. In the space below, list the Colorado Academic Standards (CAS) that align with the proposed AP/IB course.

Standard 2: Computing Systems and Networks
- Communication between computers (and over the internet) can be configured in many different ways and consists of several hardware and software components.
- Systems thinking is a way of holistically examining the various components and use cases that go into a given design.
- Robust computing systems require data protection.

Standard 4: Cybersecurity
- Confidentiality, integrity, and availability (CIA) are core principles of cybersecurity.
- Encryption is fundamental to data security and privacy and is important in cybersecurity.
- Anticipate, identify, and understand cyber security threats from the prospective adversary (attacker) and incorporate this into a security risk profile that takes into consideration the potential damage of a compromise vs the cost and inconvenience of implementing security.

SECTION IV: IMPLEMENTATION NEEDS

A. How does this course fit into the overall educational program? Provide a flow chart of where this course fits in a subject area pathway (what courses precede and follow the proposed course, if any).

No prerequisites are required. However, it would be beneficial to have taken AP Cyber: Networking or AP Computer Science Principles

B. Describe the process and timeline for the development of necessary teacher resources, including instructional ideas, training, methods, materials, and technology.

A teacher would need to attend a Career Kickstart Summer Institute provided by the College Board in order to offer the course.

C. Describe any textbooks, required curriculum material, and/or supplemental materials necessary to support the proposed course. (See the Textbook Novel Adoption Website).

The College Board provides the framework that teachers use to teach the course and relevant content.

D. What physical arrangement (buildings, equipment, technology, room, land) is necessary to support the proposed learning activities?

Students taking the course would need to have access to a computer (Mac or PC) that gives them the ability to work on virtual machines to use both Linux and Windows machines.

E. Is there an impact on the building schedule?

☑ No
☐ Yes (please explain)

Explanation:

SECTION V: FINANCIAL NEEDS

BUDGET:

What is the detailed estimated budget for the course over the next three years? Include items such as textbooks, FTE, training, and other resources. Ensure that the budget details provided are both current and comprehensive.

Link to proposed budget:	**https://docs.google.com/spreadsheets/d/1qF63_lKTAM7xTMef8bVzKSu-6Hr2xB-FmvPJ9xamTJ0/edit?usp=sharing**

FEE:

If this course requires a fee, please include the suggested amount along with the rationale for the fee. Ensure that the suggested fee is approved in accordance with Board Policy JQ: Student Fees by coordinating with the appropriate Executive Director of Schools and the Academic Systems designee. Please complete the fee proposal form.

Link to fee proposal:	

SECTION VI: LEVEL PRINCIPAL APPROVAL

A. **Level Administrators (Principals):**
The CIA team will present the course proposal at the appropriate level meeting. If the principals choose not to approve the course, the process will end at that point.

Date of Review: 05/0802025

Number of Principals in attendance: 13

Number of Principals Approving Course: 13

Number of Principals wanting to return to the Course for additional work: 0

Number of Principals rejecting the course: 0

☑ Forward with approval

☐ Return with the following comment(s), concern(s), or question(s) that will need to be addressed:

☐ Do not forward because:

SECTION VII: DCSD SYSTEM APPROVAL

At this stage of the process, the course proposal is submitted to the relevant stakeholders for final review. Approval is indicated by providing a signature and date.

A. Building Administrator:

Name: Rob Ceglie School: Mountain Vista HS

Signature: Rob Ceglie Date: May 08 2025

B. Director of Curriculum, Instruction, & Assessment:

Name: Erica Mason

Signature: Erica Mason Date: May 08 2025

C. Executive Director of Schools:

Name: Ian Wells

Signature: Ian Wells Date: May 09 2025

D. Learning Services Officer:

Name: Matt Reynolds

Signature: Matt Reynolds Date: May 12 2025

E. Assistant Superintendent:

Name: Danny Winsor

Signature: Danny Winsor Date: May 12 2025

SECTION VIII: BOARD OF EDUCATION APPROVAL

This proposal has been submitted and thoroughly reviewed by DCSD Staff. It has been determined to meet all necessary criteria and is now ready for the Board's review and approval.

Does the DCSD Board of Education approve the adoption of the proposed course?

☐ Yes ☐ No

BOE President Signature: _____

Date of BOE Meeting: _____

SECTION IX: ACADEMIC SYSTEMS COURSE BUILD

This section is utilized by the Academic Systems Team to build the course within Infinite Campus (IC). Once the process is complete, both the requestor and the building principal will be notified. Additionally, the appropriate contacts at each school will be informed of the new course offering.

Office use	Input	Entered by:
Credit type(s): *(Fine Art, Science, Practical Arts, etc.)*	PRA / ELE	
Department Code:	IT	
Course Number:	30508S1/S2	
Date entered in Infinite Campus database:		
Course Mapping SCED Code:	10 108	
Course entered in NCAA database (if applicable):	N/A	
Lock Program ID VIP code:	N/A	
Lock VE CIP code:	N/A	
Add to HEAR list Yes or No	N/A	

May 08 2025

Audit Trail

Document Details

Title	RE: Course Proposal Approval Request – AP CK Cyber: Security (IKF-R-3)
File Name	_IGA-E-3 AP CK Cyber_ Security.pdf
Document ID	1b84493ff3f24db098dbc1722d9cbc69
Fingerprint	8ab37ffdc934ed4444ad15915341af10
Status	Completed

Document History

Document Created	Document Created by Philip Ranford (pgranford@dcsdk12.org) Fingerprint: 6f379422db1dfe21dde9ba5a8752f441	May 08 2025 08:59AM America/Denver
Document Sent	Document Sent to Philip Ranford (pgranford@dcsdk12.org)	May 08 2025 08:59AM America/Denver
Document Viewed	Document Viewed by Philip Ranford (pgranford@dcsdk12.org) IP: 66.85.41.56	May 08 2025 10:39AM America/Denver
Document Viewed	Document Viewed by Philip Ranford (pgranford@dcsdk12.org) IP: 3.210.238.173	May 08 2025 10:39AM America/Denver
Document Signed	Document Signed by Philip Ranford (pgranford@dcsdk12.org) IP: 66.85.41.56 	May 08 2025 11:52AM America/Denver
Document Sent	Document Sent to Rob Ceglie (rob.ceglie@dcsdk12.org)	May 08 2025 11:52AM America/Denver
Document Viewed	Document Viewed by Rob Ceglie (rob.ceglie@dcsdk12.org) IP: 66.85.41.56	May 08 2025 01:36PM America/Denver

Document Viewed	Document Viewed by Rob Ceglie (rob.ceglie@dcsdk12.org) IP: 3.224.123.16	May 08 2025 01:36PM America/Denver
Document Signed	Document Signed by Rob Ceglie (rob.ceglie@dcsdk12.org) IP: 66.85.41.56 	May 08 2025 01:36PM America/Denver
Document Sent	Document Sent to Erica Mason (elmason@dcsdk12.org)	May 08 2025 01:36PM America/Denver
Document Viewed	Document Viewed by Erica Mason (elmason@dcsdk12.org) IP: 66.85.41.187	May 08 2025 02:38PM America/Denver
Document Signed	Document Signed by Erica Mason (elmason@dcsdk12.org) IP: 66.85.41.187 	May 08 2025 02:38PM America/Denver
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Document Viewed	Document Viewed by Ian Wells (iwwells1@dcsdk12.org) IP: 76.154.34.113	May 09 2025 08:26AM America/Denver
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Document Sent	Document Sent to Matt Reynolds (mjreynolds@dcsdk12.org)	May 09 2025 08:26AM America/Denver
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Document Signed	Document Signed by Matt Reynolds (mjreynolds@dcsdk12.org) IP: 66.85.41.187 	May 09 2025 08:52AM America/Denver

Document Sent	Document Sent to Danny Winsor (drwinsor@dcsdk12.org)	May 09 2025 08:52AM America/Denver
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Document Completed	This document has been completed. Fingerprint: 8ab37ffdc934ed4444ad15915341af10	May 12 2025 09:15PM America/Denver