COLLEGE OF MARIN

Computer Information Systems
Advisory Meeting

MINUTES

Monday, May 16, 2022
4 – 5:30 p.m. PDT

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Presented by:
Alina Varona, Dean of Workforce Development and Career Education, College of Marin (COM)
Heather Rahman, Workforce and Program Partnership Specialist, Career Education, COM
Manny Kang, COM Instructor, Computer Information Systems (CIS)
Lance Barthelemy, COM Instructor, MOS/Quickbooks/CompTIA Certifications

Attended:
Doug Kaye, Software company owner, CTO for 4 startup companies, retired
Sarah Flashman, Recruiting Account Executive, Artizen Staffing
Jeff Yates, COM Instructor, Computer Science
Yvonne Ortiz, MOS Instructor, CIS
Patrick Ekoue-totou, CIO, COM
Ron Palmer, Chair for Career Education, Automotive Instructor, COM
Kathleen Antokhin, Program Coordinator for Workforce Projects, COM
Ray Kaupp, Information Communication Technology, Bay Area Community College Consortium
Matthew Howard, COM IT Supervisor
Ed Essick, CIS Instructor, COM
Araceli Nunez, K-12 Pathway Program Coordinator, Marin County Office of Education
Hannah Kirk, former CIS student, CIS Lab Assistant

Welcome, Introductions and Overview of Career Education	Heather Rahman opened the meeting at 4:01 p.m. The meeting began with welcoming folks and asking everyone to introduce themselves. Alina Varona presented giving a broad overview of Career Education and reported out the metrics and demographics of the Computer Information Systems (CIS) program. (Please refer to attached slides.)
Open Discussion	Alina opened the meeting for discussions regarding the industry and what the last year has been like.

The committee responded as such:

- This is the most challenging time for recruiting.
- There are a full range of technical positions all the way up to Python developers. Many positions are available in an aerospace company.
- Sara Flashman agreed to send over job descriptions of available jobs.
- Through the pandemic, it seems hiring managers were fishing to find elite candidates. There seems to be a disconnect with those searching for employment and the job openings.
- Many roles are highly specific and the employers need candidates with finished skills.
- There is also a dilemma where even if a candidate has skills, they will often need experience too. Very few companies are willing to take a risk on a new college graduate with no experience.
- Students may have to prove they can work with grueling computer programming languages or succeed in a rigorous internship to build their resumes.

Alina stated College of Marin is mindful of how we scaffold opportunities throughout the students' educational trajectory. Some students come to us already have a bachelor's degree but green in work experience.

- According to Ray, large companies such as IBM, Cisco, Google, etc. have helped our regional ICT folks to identify areas where there are shortages in the market.
- When a new discipline within technology emerges such as AI, companies start hiring those with PhD and Master's degrees. Then they hire the next level employees like those with bachelor's degrees. The hiring continues until the department matures, and only then they begin hiring entry level jobs.
- Cloud computing is a big area.
- A.I. will be a hug labor market for community college students.
- Virtual production is another discipline emerging quickly and it is a crossover area sometimes fitting into art, CIS or multimedia educational sectors.

Alina recognized that two-year students will have a tougher time going head-to-head with students with a four-year credential and beyond. An open access institution trying to serve everybody so that all are resourced in an equal way, along with preparing students so they are really positioned to be competitive, is difficult.

	• Teaching more specific programs and deeper learning such as Python, Salesforce, CompTIA will help students get into the field better than generic base learning such as Customer Records Management. The big certification titles matter on a resume. • Boot camps are aiming right up the middle and are aligned with hiring at larger companies. They build curriculum exactly for what the big companies want. • Canada is offering a full stack developer program which is non-credit stripping all additional education. • Many entry level positions are offered overseas, and American workers are hired as managers/supervisors for those employees checking the code work. • CIS students would benefit for having two skills such as business/MBA round out a career pathway. • One challenge is the College is slow to respond to rapid changing technology industry and intense demand with building out programs, such as data analytics short term training (not for credit) program.
Labor Market Information	Heather presented the most recent labor market findings for related occupational sectors with salary averages and growth in job opportunities. The committee commented that the findings seemed true.
Opportunities for Growth	Lance Barthelemy reported out about the offerings for CIS including the Microsoft certification options and Quickbooks. MOS has increased in student headcount from 20 in 2017 to 46 in 2022. He mentioned the benefits students gain when learning Microsoft office applications. The committee commented: • Microsoft is something that many people can learn independently or have others help them without going to college. • About 95% jobs require Microsoft skills including customer service positions. • Not too many use Access any longer. SQL, Python and other applications have somewhat replaced it. • Software applications are taught at the high school level pretty broadly now. • If people are learning on their own with their kids' help, then they are *not learning why they* use certain features.

	Manny Kang spoke about possible new CIS program offerings: • The Networking and System Admin. certificate would prepare students to pass CompTIA + exam. • The Web Software and Information Security certificate would incorporate Python and Information Systems Security; classes which already exist. The committee responded: • Consider making the certificates attainable in one semester for 12 units total. • Consider focusing on one specialization such as Python or Basic, but not both. Python should be priority over Basic. • These certificates would only tee up a student to prepare for an industry recognized certificate which would weigh more heavily in the job market. • Unix is what all operating systems are based upon. Consider Linux vs. Unix.
High School Connections	Araceli offered the following: • Cisco is offered as an academy at one area high school. • Since students were away from classes for about 2 years in response to the pandemic, social skills development is now lacking. • Students are gaining more and more interested in learning Cisco and they are interested in the next steps to keep learning. Heather announced that our connections with high schools and work to bridge their education to post-secondary learning is expanding and deepening. We are working with counselors and are designing new pathway sheets and educational maps.
Summary and Next Steps	Our take-aways included: • Chunk out the curriculum and maybe stack them so a student can have specialization the moves forward a variety of certifications. • Consider 12-week structures. • Offering things that would be more akin to exam preparation. • Consider what really should be our wheelhouse without adding too much competition with other area community colleges. • Look at past programs to see where the successes were and the reasons why some never made it off the ground. "Measure twice and cut once." The meeting adjourned at 5:25 p.m.

Hello!

Please share your name, role, organization.

AGENDA

Where We Are. Where We're Going.

Welcome & Introductions

Overview

Advisory Check-in

Labor Market Information

Program Growth and Discussion

High School Pathways

Summary Wrap-up
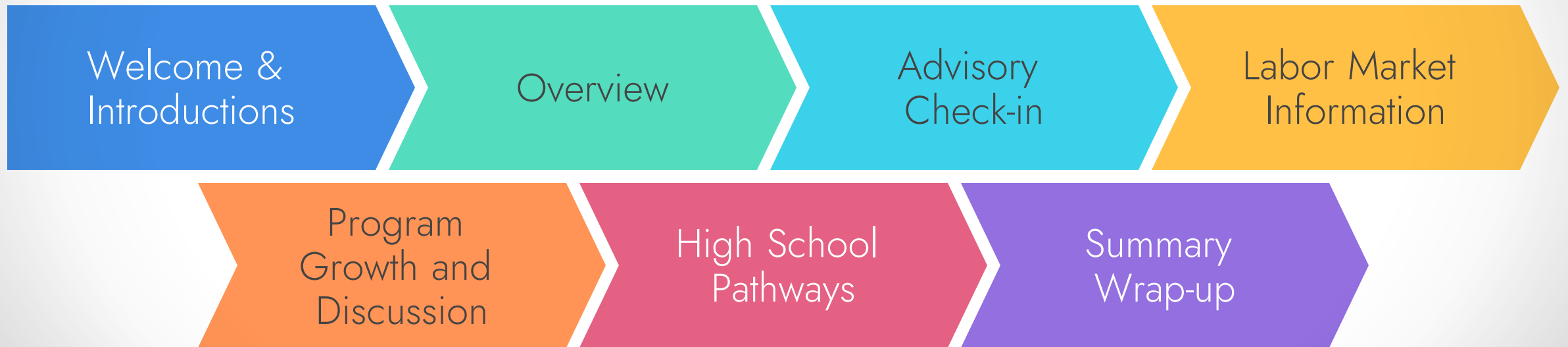
Overview

Alina Varona, Dean of Career Education and Workforce Development

Overview of Career Education and Workforce Development

Prepare students with skills for 21st century jobs, careers, and the future of work

Degrees and Certificates

- **Create Pathways & Support Momentum**

Short Term Training and Workforce Development

- **Respond In-Time to Labor Market Needs and Connect to Employment**
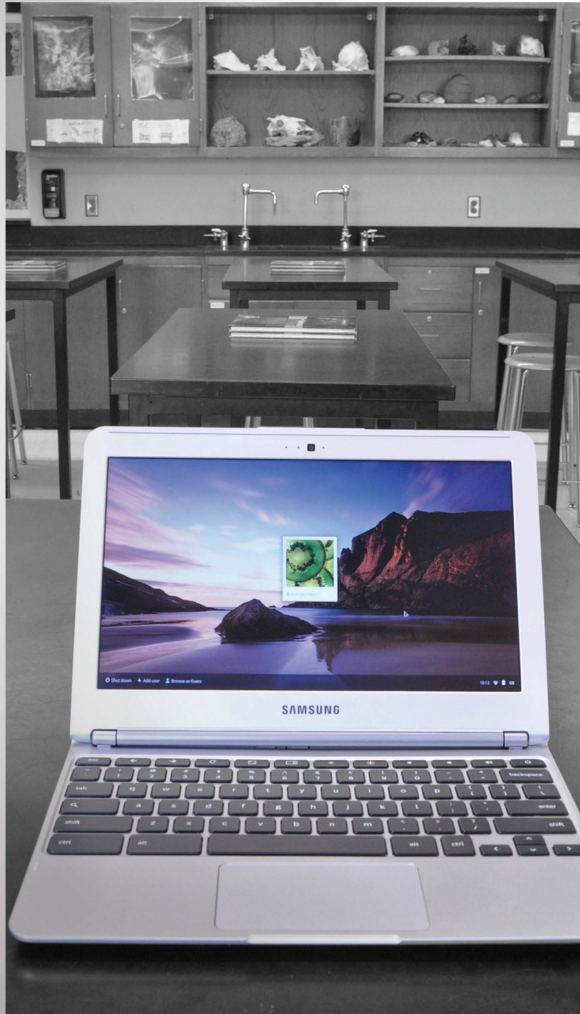
Non Credit Education

- **Ladder and Bridge to Basic Skills, Work, and Credit**

2.1 million students at 116 **colleges**

Career Education: Programs

- Administration of Justice

- Auto & Industrial

  Auto Collision Repair; Auto Technology; Electronics; Machine & Metals

- Computers & Multimedia

  Computer Information Systems; Graphic Design; 3D, Video, Game Dev; Web Design and Development; MS Office Certification; Cyber Security

- Court Reporting

- Health Sciences

  Dental Assisting; Emergency Medical Technician Training; Medical Assisting

- Organic Farming

- Education 2 Career (E2C)

  Construction Program

- Summer Career Academies

- Short-Term Career Training Programs (12 Weeks)

  Business Start-Up; Small Business Management; Office Technology: online selling, accounting, office applications, social media marketing

WHY ADVISORY COMMITTEES?

Centering the Community in Community College Practice and Programs

Title 5: §55601[1]

- The governing board of each community college district participating in a vocational education program shall appoint a vocational education advisory committee
- Committee will develop recommendations on the program and be a liaison between the district and potential employers.

Committee Members

- Shall have one or more representatives of the general public
- Must be knowledgeable about the educational needs of disadvantaged populations
- Students, teachers, business, industry, the college administration, and the field office of the Employment Development Department

Funding Requirements

- Extensive business and industry involvement
- Evidenced by not less than one annual business and industry advisory committee meeting
- (Section 135(b) of Perkins IV[2]).

https://www.asccc.org/content/cte-advisory-committees-making-them-work-you

Meaningful Advisory Committee Participation

35% increase in advisory member participation to date

18%

91%

2019-2020

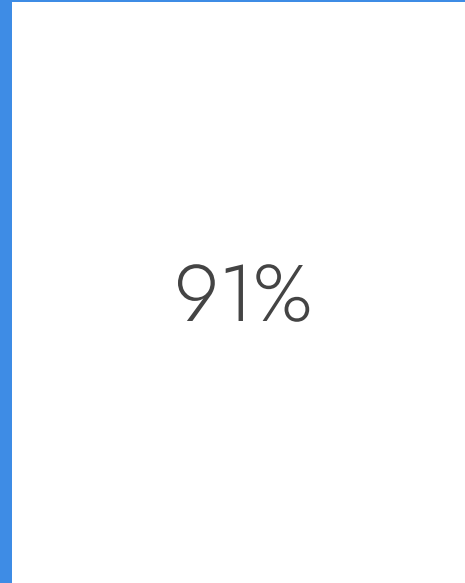2020-2021

Two out of Eleven Programs Convened

Four Programs Convened. Six Scheduled.

Some programs will meet more than once.

What is **Computer Information Systems** (CIS)?

- Courses provide "hands-on" computer use that emphasizes the development of the skills necessary for employment and personal use of computers.
- Program specialties include desktop network, desktop publishing, microcomputer manager, and microcomputer programmer.
- Curriculum touches upon:

Languages/Applications	Courses also cover:
JAVA	Cascading Screen Style (CSS)
JavaScript	Content Management Systems
HTML	Integrated Drive Electronics
PYTHON	SEO
SQL	Security
BASIC	
WordPress	

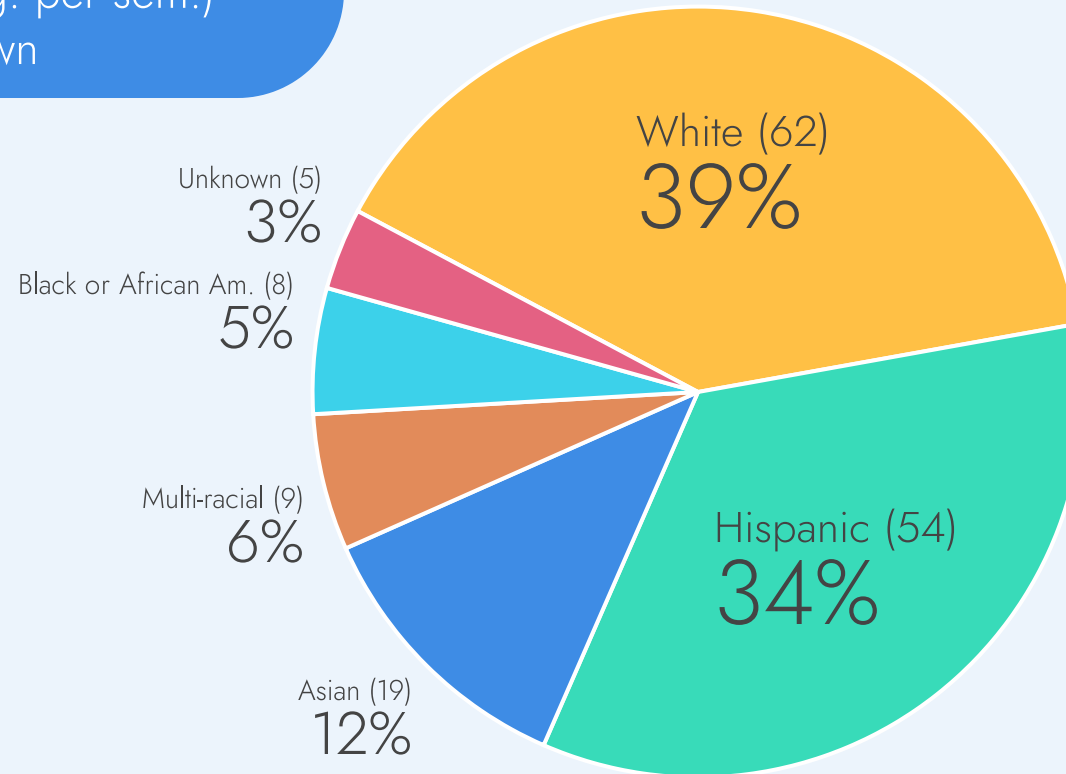# Average Student Demographics

Computer Information Systems

2018 - 2021

40% Male (63 avg. per sem.)
58% Female (92 avg. per sem.)
2% Unknown

White (62)
39%

Unknown (5)
3%

Black or African Am. (8)
5%

Multi-racial (9)
6%

Asian (19)
12%

Hispanic (54)
34%

COLLEGE OF MARIN CREDIT STUDENT CHARACTERISTICS

Gender: Male 39% Female 60%;
Median Age: 23
Race/Ethnicity:
Asian: 487 (7%)
Black/African American: 207 (3%)
Hispanic: 1,985 (30%)
Multi-racial: 408 (6%)
Native American: 14 (0.2%)
Native Hawaiian/Pacific Islander: 13 (0.2%)
White: 3,211 (48%)

Program Outcomes

Computer Information Systems

2018 - 2021

Persistence - First Time Students Fall to Spring

- Female: **100%**
- Male: **92%**

Program Persistence Overall:

95%

Higher than College persistence rate: **73%** average

Course **Retention** by Gender (%)

- Female: **85%**
- Male: **82%**

Program Retention Overall:

84%

Aligned closely to College average at **85%**

Program Success - Awards

Fall 2018 - Spring 2021

- Certificates: **3**
- Degrees: **5**
- Transfers: **2**

Course Success -

Overall course success rate is:

76%

Aligned closely to College average at **77%** for 2019-20

Advisory Check-In

PRIORITIES AND CURRENT LANDSCAPE

Advisory Member Share Outs & Discussion

What has this last year looked like for your field?

Staffing and Recruiting

Training & Professional Development

Community Partnership & Impacts
- How should we best prepare our students to be qualified and competitive?

Needs and Priorities
- What are your current priorities and needs for hiring?

Other Key Items?
- What should we be aware of to support our future students?
- Potential technology, training, or emerging sectors?

Labor Market Information Overview

Heather Rahman, Workforce Specialist

Regional Labor Market Information

Sources: Centers of Excellence Demand Tables and O*Net Online

http://coeccc.net/
https://www.onetonline.org/

Current COM CIS Offerings	Occupations (Typical Educational Requirements)	Alternative Job Titles	Average Annual Earnings	Annual Job Openings projected through 2028
A.S. Degree in Computer Information Systems	Computer Systems Analysts (Bachelor's degree)	Applications Analyst, Business Systems Analyst, ISA, IT Analyst, Systems Analyst	$106,947	1,030
Certificate of Achievement, Computer Information Systems	Information Security Analysts (Bachelor's degree)	Information Security Officer, ISSO, IT Specialist	$127,343	168
COMP TIA A+ Certification - Cyber Security	Computer User Support Specialists (some college)	Computer Technician, Desktop Support Technician, Help Desk Analyst, IT Specialist	$70,111	1,199
MS Office and Adobe Certifications	Computer Occupations, All Other (Bachelor's degree)	Information Technology Project Managers, Document Management Specialists, Database Administrators	$98,953	1,483
	Office and Administrative Support	Administrative Assistant, Office Managers, Bookkeeping, Data Management Specialist	$56,660	6,960

Growing Our Program

Lance Barthelemy, Instructor - Microsoft, Quickbooks and CompTIA Certificates

**Manny Kang, Doctor of Information Technology and Instructor -** CIS Certificates/Degrees

CIS **Current Offerings**

+ NEW:

Quickbooks Certification

Degrees and Certificates of Achievement:

- **Associate's of Science Degree in Computer Information Systems** (21 units + general education courses = 60 units total)

- **Certificate of Achievement, Computer Information Systems** (21 units)
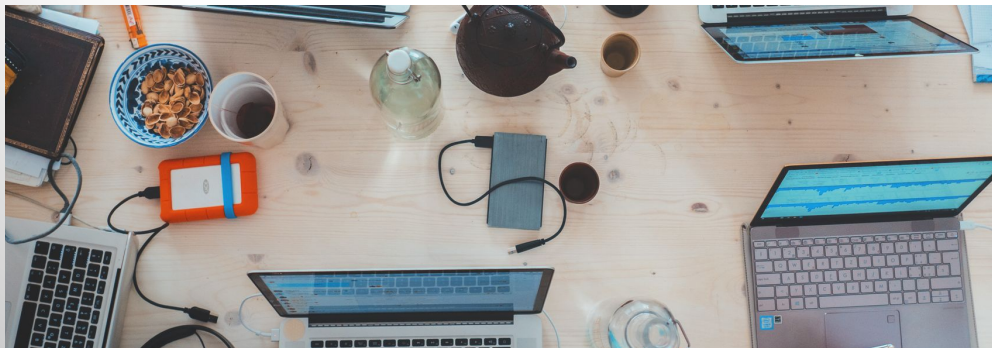
MS Office Specialist Certifications:

- **Excel** (CIS 118 & CIS 128) offered Spring and Fall Semesters.

- **Word** (CIS 102 & CIS 103) offered Spring and Fall Semesters.

- **PowerPoint** (CIS 113) offered Fall Semester

- **Access** (CIS 117 & CIS 127) offered Fall Semester.

- **Outlook** Currently, independent study using GMetrix CertPREP.

Note: After passing the exam, students will be provided with a Microsoft digital badge, certificate, and transcript. Word
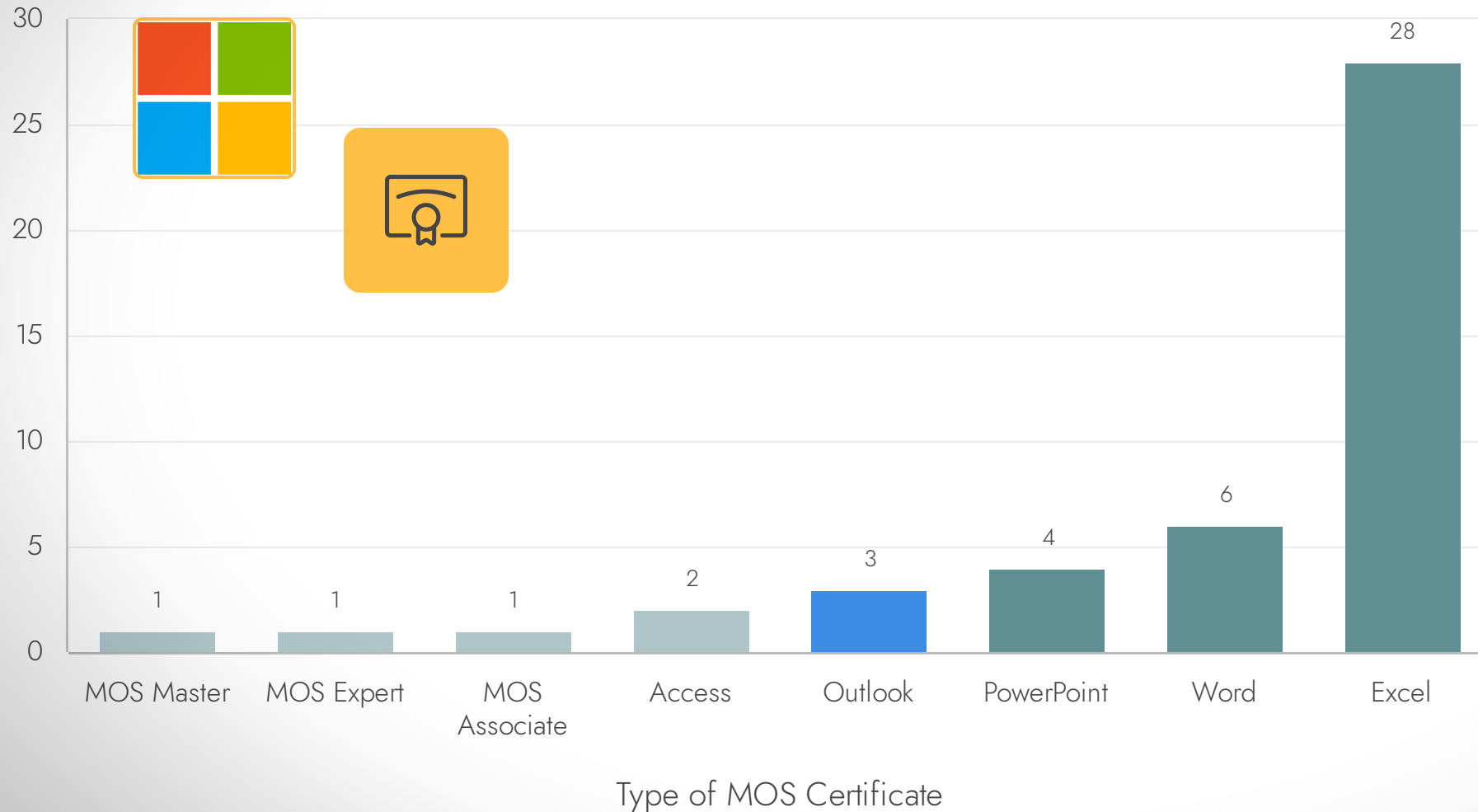
Microsoft Office Certificates

Microsoft

Studies show significant value for certification*

Increased graduation rates

- 97.5% with certification
- 78.4% without certification

Higher GPAs

- 3.12 with certification
- 2.78 without certification

Increased post-secondary enrollment

Improved student confidence

*2018-2019 Florida CAPE Academy Performance Report, Grades 9-12

- How is Microsoft Office feeding into the market?
- Do partners feel these are valuable?
- Are these certificates helpful to see on a resume?
- Do they make an impact?
- What else can help students?

CompTIA Certificate

Is there a demand for CompTIA?

Cisco CompTIA A+ Certification

Take CIS 120 IT Essentials (4 units, estimated cost: $210 in tuition and fees; $10 in books & supplies).

Cisco Level 1 exam available thru College of Marin.

Completing your CompTIA A+ certification is excellent for helpdesk and higher positions, including entry-level networking career opportunities.

CompTIA

CompTIA A+

A+ is the starting point for a career in IT. The performance-based exams certify foundation skills across a variety of devices and operating systems.

CompTIA Security+

Security+ provides a global benchmark for best practices in IT network and operational security, one of the fastest-growing fields in IT.

CompTIA Network+

Network+ certifies the essential skills needed to confidently design, configure, manage and troubleshoot any wired and wireless devices.

Advisory Check-In

Internships

5 key questions

1 After 1 year of CIS classes how best can a student be ready for on-the-job training/internship?

2 What skills will a student need to have at the halfway mark?

3 Do you have interest in offering an internship?

**4** Do you currently have existing opportunities or the ability for hosting students?

5 What do we want the student to gain from the internship experience?

Possible New Certificate

Network and System Administrator

This certificate will prepare students to work as an Information Technology professional to manage data centers, database centers and provide support to Microsoft and UNIX networks users.

Total: **14.5 units**
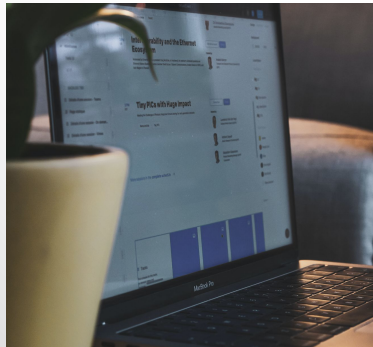
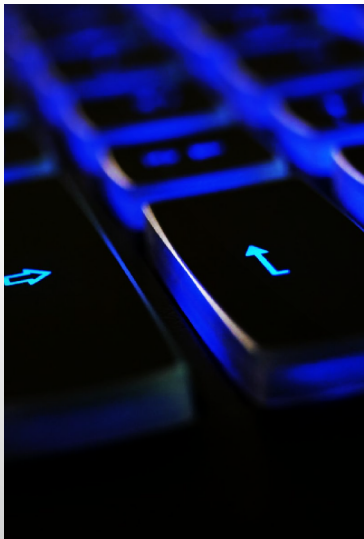Would this certificate benefit students and prepare them for work?

Courses -

- CIS 101 : **Introduction to Personal Computers and Operating Systems** : *1.5 Units*
- CIS 126: **Introduction to Windows** : *1.5 Units. 1 lecture and 1.5 lab hrs/wk. No prerequisite. Advisory: CIS 101 or 110.*
- CIS 155A: **Systems and Network Administration** : 3 Units. 2 lecture and 3 lab hrs/wk. 3.0 Units. 2 lecture and 3 lab hrs/wk. No prerequisite. Advisory: CIS 275.
- CIS 237: **Introduction to SQL Programming** - *1.5 Units. 1 lecture and 1.5 lab hrs/wk. No prerequisite. Advisory: CIS 137.*
- CIS 275: **Networking Fundamentals and Practices** : *3 Units. 2 lecture and 3 lab hrs/wk. No prerequisite. Advisory: CIS 170 or 110.*

  CIS-XXX: **Unix System Administration** – Needs to developed – 4 units

Possible New Certificate

Web Software and Information Security Analyst

This certificate will prepare students to work as an Information Security professional to manage and secure private and public cloud-based application systems.

Total: **15.5 units**

Would this certificate benefit students and prepare them for work?

Courses -

- CIS 101 : **Introduction to Personal Computers and Operating Systems** *1.5 Units*

- COMP 138- **Introduction to Programming- Python Programming** 4 Units

- CIS 120: **IT Essentials: PC Hardware and Software** *4.0 Units. 3 lecture and 3 lab hrs/wk. No prerequisite*

- CIS 160: **Introduction to Information Systems Security** *3.0 Units. 2 lecture and 3 lab hrs/wk. No prerequisite. Advisory: CIS 275.*

- CIS 215: **Visual BASIC Programming**   3.5 units

Possible **New** Software, Applications/Subscriptions

1. Virtual labs to support CompTIA training

2. MS Project software for Computerized Project Management

3. TestOut for MS Office - application used in computer labs

What do you suggest?
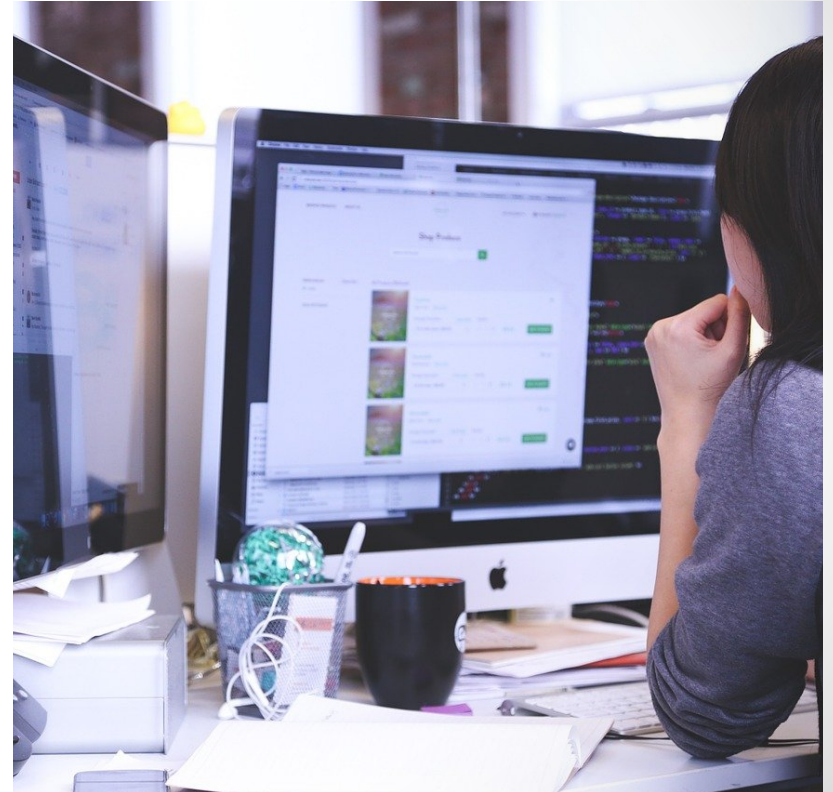
High School Connection

Building Pathways

High School Offerings

Currently working with local high schools to bridge their classes to College of Marin

San Marin High School:

- CISCO - IT Essentials, Networks, Switching and Routing
- about 30 students

Summer Career Academies - Cyber Security Classes (Into and Intermediate)

New **Pathway Sheets**

Computer Information Systems

CAREERS / ANNUAL AVERAGE INCOME
- Network and Computer Systems Administration - $95,442
- Information Security Analysts - $107,250
- Business Operations Specialists - $63,000
- Database Administrators - $79,329
- Executive Administration Assistants - $68,315

PROGRAM OFFERINGS
- Associate in Science Degree in Computer Information Systems (60.0 Units)
- Certificate of Achievement, Computer Information Systems (13.5 Units)
- Skills Certificate, Microsoft Office (10.5 units)
- Skills Certificate, Microsoft Office Database Specialist (6.0 Units)

FALL CORE CLASSES

CIS103 – Intermediate MS Word (1.5 units, CSU)

CIS110 – Intro to Computer Information Systems (3 units, CSU/UC)

CIS113 – MS PowerPoint Presentations and Publications (1.5 units, CSU)

CIS118 – Intro to MS Excel Spreadsheet Design (1.5 units, CSU)

CIS 128 – Intermediate MS Excel Spreadsheet Design (1.5 units, CSU)

SPRING CORE CLASSES

CIS102 – Beginning MS Word (1.5 units, CSU)

CIS117 – Intro to MS Access Database Design (1.5 units, CSU)

CIS127 – Intermediate MS Access Database Design (1.5 units, CSU)

+ additional 7.5 units from a selected list

* Course scheduling is subject to change. Please check with a counselor to determine your educational plan. Classes are located at IVC, KTD and online..

TO GET STARTED

Course Scheduling www1.marin.edu/schedule

Enrollment Services, Financial Aid and Registration es.marin.edu

High School student programs and enrollment information www1.marin.edu/high-school-programs

PROGRAM CONTACT
Manny Kang
MaKang@marin.edu
(415) 457-8811 x8200

PROGRAM ONLINE
academics.marin.edu/program/mach

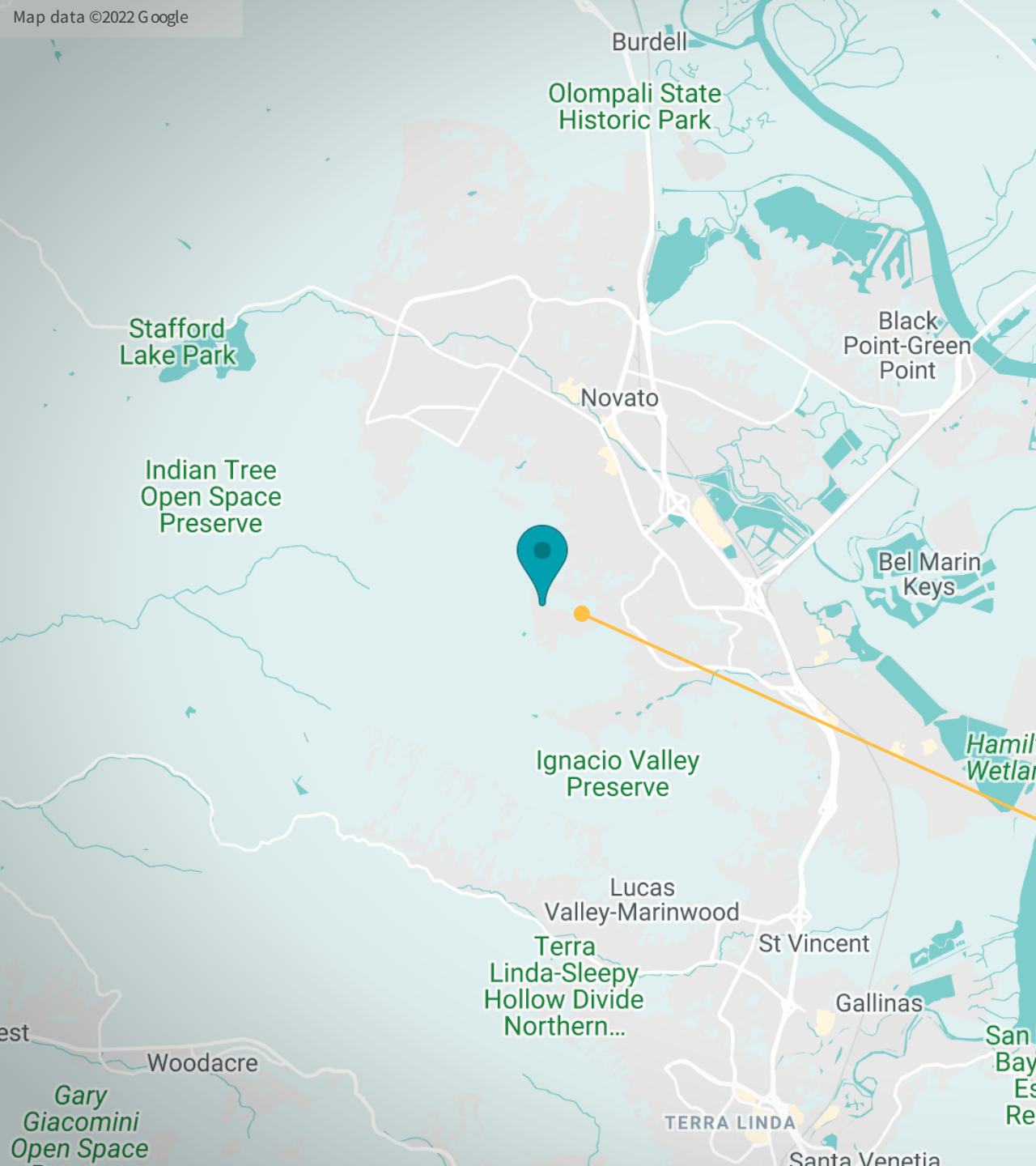**COUNSELING**
(415) 485-9432
ss.marin.edu/counseling

- 1 page
- Careers
- Offerings
- Core Classes
- Resources to get started
- Contact info.
- Program landing page

Summary/Wrap-up
Thoughts? **Questions?**
NEXT STEPS

Thank You!

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