Washtenaw Community College
Program Change Request Form

Program Code: CVCNTA   **Program Name: Computer Networking Academy Ii**   **Effective Term: Fall 2003**

A program sheet for the above named program is attached. It should reflect any <u>approved</u> changes that have already been submitted for this year. Please review the program sheet carefully and indicate any changes that you would like to make. Draw lines through anything that should be removed and write in any additions. Extensive narrative changes may be written on a separate sheet. Check the boxes below for each type of change being proposed. If courses are being changed as part of this proposal, they must be approved separately, using a Course-Syllabus Approval Form (CSAF).

1. Requested Changes:

☐ Remove Course(s)
☐ Add Course(s)
☐ Increase/Decrease Credits
☐ Course Sequence
☐ Name (new name _____)
☒ Major/Program Code (new code __CPCNTA__)
☐ Description

☐ Advisors
☐ Articulation Agreements
☐ Program Admission Requirements/Procedures
☐ Continuing Eligibility Requirements
☐ Footnotes
☒ Other <u>Change Certificate Type to "Post-Associate Certificate" from "Advanced Certificate"</u>

Show all changes on the attached program sheet if possible.

Rationale for Proposed Changes: This certificate was designed for students who have already completed the Computer Networking (APCNTM) Associate in Applied Science Degree, consisting of:

1. Computer Networking Academy I (CVCNT)
2. Computer Systems Technology (CTCSTC)
2. General Education Requirements plus 1 -6 Additional Credits.

2.0 GPA

This program addresses advanced skills need for a job as a network administrator/engineer, where you will design, install, configure and troubleshoot Local and Wide Area Networks using Cisco equipment. The ~~course~~ *program* helps prepare you to pass the Cisco Certified Network Professional examinations.

The Certificate Title would have been originally "Post-Associate Certificate" but that classification did not exist in 1999, when the original forms were submitted (See attached copy of original form, and also modified form from 2002/2003 catalog)..

3. Financial/Staffing/Equipment/Space Implications:
None.

4. Has the department consulted with all departments that may be impacted?   Yes ☒   No ☐   NA ☐

Comments:

Signatures:

Reviewer	Print Name	Signature	Date
Program Change Initiator:	John Trame	*[signature]*	11/19/2002
Department Chair:	GARY DOWNEN	*[signature]*	11/27/02
Division Dean:	Rosemary Wilson	*[signature]*	12/9/02
VP, Instruction/Student Services:		*[signature]*	4/9/03

Access Program File____4/14____   Log ___4/14___   Copied and Returned _____
Copies: Initiator, Department Chair, Dean, Curriculum File   New Listing to: Counseling; Admissions
Curriculum and Articulation Services:
Curriculum Development\Forms\Programs\Program Change Form 1/9/01

Document Code: WPM$4472.doc

Computer Systems

Computer Networking Academy II (CPCNTA)
Post-Associate Certificate

Program Effective Term: Fall 2003

This Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Business and Computer Technologies Division

Computer Instruction Department and Electronics Department

Advisors: Michael Galea, James Lewis, John Trame

Program Admission Requirements:
Students must complete the Computer Networking Associate (APCNTM) degree program with a GPA of 2.0 or better.

Major/Area Requirements (16 Credits)

CNT 246	Advanced Routing Configuration	4
CNT 256	Remote Access Networks	4
CNT 266	Multi-Layer Switching	4
CNT 276	Network Troubleshooting	4

Minimum Credits Required for the Program: 16

WASHTENAW COMMUNITY COLLEGE
PROGRAM CHANGE FORM

Program Code: Program Name:

Effective Term: Fall

CVCNTA   Computer Networking Academy II

~~Winter 2003~~ 2002

> **Directions:** Attach the current program listing from the WCC catalog and indicate any changes that you would like to make. Draw lines through anything that should be deleted and write in additions. Extensive narrative changes may be included on a separate sheet. Check the boxes below for each type of change being proposed. If you are making changes to courses or proposing new courses as part of this proposal, they must be approved separately using a Course-Syllabus Approval Form (CSAF). Courses that are being discontinued also should be submitted on CSAF forms.

1. Requested Changes:

☐ Remove _____ Course(s)
☐ Add _____ Course(s)
☒ Total Credits: Current Credits _16_ After Changes _20_
☐ Change Course Semester Sequencing
☐ Change Title (title was _____)
☐ Description

☐ Advisors
☐ Articulation Information
☐ Program Admission Requirements
☐ Continuing Eligibility Requirements
☐ Footnotes
☐ Other _____

Show all changes on the attached program sheet.

2. Rationale for Proposed Changes:

The 2002-2003 Bulletin had an error in the requirements of the program. All classes in the program went from 4 credits each to 5 credits each.
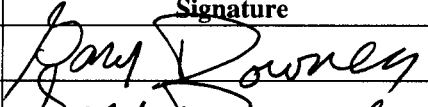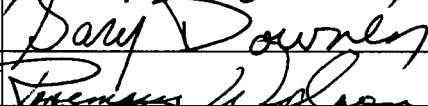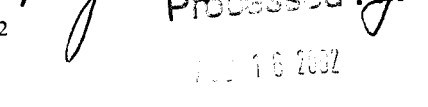
3. Financial/Staffing/Equipment/Space Implications:

None.

4. Has the department consulted with all departments that may be impacted?   Yes ☒   No ☐   NA ☐

Comments:

Signatures:

Reviewer	Print Name	Signature	Date
Program Change Initiator:	Gary Downen	_Gary Downen_	8/5/02
Department Chair:	Gary Downen	_Gary Downen_	8/5/02
Division Dean:	Rosemary Wilson		8/6/02
Executive Vice President, Instruction	Roger M. Palay	_Roger M. Palay_	8/6/02

Curriculum and Articulation Services:
Curriculum Development\Forms\Program Forms\Program Change Form v2.3.doc 6/18/02

Processed

1 6 2002

Office of Curriculum & Articulation Services

Access Program File_____ Log _8/6/02_ Copied and Returned _____
Copies: Initiator, Department Chair, Dean, Curriculum Files
New Listing to: Counseling; Admissions, Student Records

File Name: V19RDCH0.doc

Computer Systems

Computer Networking Academy II (CVCNTA)
Advanced Certificate

Program Effective Term: Fall 2002

This Cisco Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Business and Computer Technologies Division
Computer Instruction Department and Electronics Department

Advisors: Michael Galea, James Lewis, John Trame

Program Admission Requirements:
Completion of the Computer Networking Academy I (CVCNT) program with a GPA of 2.0 or better.

Major/Area Requirements		(20 Credits)
CNT 246	Advanced Routing Configuration	5
CNT 256	Remote Access Networks	5
CNT 266	Multi-Layer Switching	5
CNT 276	Network Troubleshooting	5
Minimum Credits Required for the Program:		**20**

WASHTENAW COMMUNITY COLLEGE
PROGRAM AUTHORIZATION FORM

1. **Program Title:** Computer Networking Technology   **Program Code:** C N T

2. **Division:** BUS/TEC   3. **Department:** CISD/ELED   **CIP Code:**

4. **Type of Program:**   ☐ A.A.   ☐ A.S.   ☐ A.A.S.   ☐ A.T.S.

    ☒ Advanced Certificate   ☐ Mastery Certificate   ☐ Achievement Certificate   ☐ Certificate of Completion

5. **Will this program be Perkins funded?**   ☒ yes   ☐ no   6. **Effective Year:** F99

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7. **Program Description (for Catalog, brochures, etc.:**

This is an advanced certificate program in Networking. The program will provide two options: (a) Novell Technician, and (b) Microsoft Technician. These options will provide the students with the knowledge and skills to install, configure, and troubleshoot Local Area Networks. as well as pass the first required exam (Networking Technologies or Networking Essentials) for either the Novell Certified NetWare Engineer or Microsoft Certified Systems Engineer.

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8. **Advisors:** Gary Downen, Charles Finkbeiner, Michael Galea, Phil Geyer, Usha Jindal, Laurence Krieg, Roland Meade, John Rinn, John Trame, Catherine Wagner

9. Admissions Criteria:	10. Criteria for Continuing Program Eligibility:
Completion of the Computer Systems Technology Certificate, or equivalent experience.	

11. **Attach a Program Approval Document [PAD]**, which includes the following:

A. Program Description   D. Enrollment Projections   G. Analysis of Affected Instructional Units
B. Program Goals   E. Program Cost Analysis   H. Articulations
C. Needs Assessment   F. Course Descriptions   I. Licensure/Accreditation

Approval Recommended: **Print Name**   **Signature**   **Date**

Program Initiator: John Trame/Michael Galea

Department Chair/Director: John Trame/Roland Meade

Dean: Roger Bertoia/Bella Parker   3/19/99

VP, Instruction/Student Services: Guy Altieri   4/25/99

President: Larry Whitworth   5/6/99

Date of Board Approval: April 27, 1999

Available on disk

Program Approval Document

Advanced Certificate
Type of Degree or Certificate

In

COMPUTER NETWORKING TECHNOLOGY
Name of Program

Prepared by
John Trame
And
Michael Galea

Washtenaw Community College
DATE: March 16, 1999

COURSE REQUIREMENTS FOR PROGRAM

Course	Title	Credit	Pre-requisites/Co-requisites
	Novell NetWare® Option		
CNT 200	Networking Fundamentals	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 210	NetWare Administration	3	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 215	Structured Cabling Systems and Documentation	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 220	Advanced NetWare Administration	3	CNT 210
CNT 225	Switching and Routing Techniques	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
	Microsoft Windows® NT Option		
CNT 200	Networking Fundamentals	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 211	Administering Microsoft Windows NT Server	3	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 215	Structured Cabling Systems and Documentation	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 221	Supporting Microsoft® Windows NT Server Core Technologies	3	CNT 211
CNT 225	Switching and Routing Techniques	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
Total Credits:		18	

A. PROGRAM DESCRIPTION

This certificate program trains individuals for employment as network service technicians. The program thoroughly prepares the student to pass either the Novell NetWare Administration and Advanced Administration or Microsoft Core Technologies exam. The program covers core hardware skills including configuring, installing, diagnosing, repairing, upgrading and maintaining networks. In addition, cabling systems and network documentation, as well as Network Operating Systems (MS Windows NT, or Novell NetWare) are covered in depth.

B. PROGRAM GOALS

This program is designed to educate students in the field of computer network cabling and administration. Students will learn how to install, and document, copper and fiber optic cabling systems in accordance with current cabling standards. Students will also learn how to set up, and administer network clients and servers. Graduates of this program will be employable as network cable installers, network specialists, or entry level network administrators.

C. NEEDS ASSESSMENT

Studies abound at the national; state and local level, documenting the tremendous need for network technicians, and engineers for government, education, business and industry. The local need for Washtenaw County is documented in the ICARD study of 1998. . Salaries for graduates of this program are expected to start at $30,000 per year
See attachment A.

D. ENROLLMENT PROJECTIONS

The fall of 1999 should see enrollments of approximately 120 students.
Enrollment should increase approximately twenty percent per year, for four to five years, at which point enrollment should stabilize. Steady enrolments should be maintained for approximately ten years, at which time we may notice a gradual decrease for up to five years. Stability is expected to set in once more, with a significant number of employees returning for updated education/retraining.

E. PROGRAM COST ANALYSIS

This certificate is a subset of the Advanced Computer Networking Technology Certificate. Therefore, this program does not have a separate budget. As a result, program costs are included in the Program Approval Document for the Advanced Computer Networking Technology Certificate.

F. COURSE DESCRIPTIONS

Novell® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Networking Technologies Course 565 (WCC title is Network Concepts)	18	CNT200	2	2	All the basics of computer networking, including terms and concepts. Networking technology — how it works, and why it works — is made clear in this course, where concepts like contemporary network services, transmission media, and protocols are explained. Learn how protocols are used in networking implementations from many vendors, especially those most common in today's LANs and WANs.
NetWare® 5 Administration Course 560	30	CNT210	3	5	This course is designed to provide students with the necessary knowledge and skills to perform competently in the role of network administrator or system manager for NetWare ® 5. Students completing this course will be able to accomplish fundamental network management tasks on a NetWare® 5 network. **Note:** Formerly CIS 125

Novell® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Advanced NetWare® 5 Administration Course 570	30	CNT220	3	5	Provides the knowledge and skills to design, configure and administer networks with NetWare® 5. This course gives you the advanced skills to upgrade previous versions of NetWare® to NetWare® 5, configure IP, use Java-based utilities, NetWare® Loadable Modules (NLMs), backup, and remote operations

Microsoft® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Networking Essentials Self-Paced Training Kit Course 578					The requirements for this course are fulfilled by CNT200 Network Concepts. This commercial version of this course is offered as self-paced training.
Administering Microsoft® Windows NT® 4.0 Course 803	18	CNT211	2	3	This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain Microsoft® Windows NT®-based network. It also provides students with the prerequisite knowledge and skills required for course 687, Supporting Microsoft Windows NT 4.0-Core Technologies, and course 694, Microsoft Windows NT-Technical Support self-paced training.
Supporting Microsoft® Windows NT® 4.0 Core Technologies Course 922	30	CNT221	3	5	This course provides the core foundation for supporting Microsoft® Windows NT® operating system version 4.0. The goal of this course is to provide support professionals with the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows NT 4.0. Content primarily of interest in a complex environment-such as capacity planning on a server and a network, multiple domain management, and trust relationships--is covered in depth in a series of courses that makes up the Microsoft Windows NT Enterprise Series. Content specific to administration of the Windows NT Server network operating system can be found in the Administering Microsoft Windows NT 4.0 course

Core Hardware® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Structured Cabling Systems and Documentation		CNT215	4	6	This course provides student with the knowledge and skills to design, install, document and troubleshoot stuctured cabling systems. . Topics include category 5 Unshielded Twisted Pair (UTP), Shielded Twisted Pair (STP), and fiber optic cabling.

Computer Networking Academy II (CPCNA2)
Post-Associate Certificate

Program Effective Term: Fall 2004

This Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Program Admission Requirements:
Students must complete the Computer Networking Associate degree program (APCNTM) with a GPA of 2.0 or better to be admitted into the program.

Major/Area Requirements   (16 credits)

CNT 246	Advanced Routing Configuration	4
CNT 256	Remote Access Networks	4
CNT 266	Multi-Layer Switching	4
CNT 276	Network Troubleshooting	4

Minimum Credits Required for the Program: **16**

Washtenaw Community College
Program Change Request Form

Program Code: CVCNTA   **Program Name: Computer Networking Academy Ii**   **Effective Term: Fall 2003**

A program sheet for the above named program is attached. It should reflect any <u>approved</u> changes that have already been submitted for this year. Please review the program sheet carefully and indicate any changes that you would like to make. Draw lines through anything that should be removed and write in any additions. Extensive narrative changes may be written on a separate sheet. Check the boxes below for each type of change being proposed. If courses are being changed as part of this proposal, they must be approved separately, using a Course-Syllabus Approval Form (CSAF).

1. Requested Changes:

☐ Remove Course(s)
☐ Add Course(s)
☐ Increase/Decrease Credits
☐ Course Sequence
☐ Name (new name _____)
☒ Major/Program Code (new code ___ C**P**C**N**T**A**___)
☐ Description

☐ Advisors
☐ Articulation Agreements
☐ Program Admission Requirements/Procedures
☐ Continuing Eligibility Requirements
☐ Footnotes
☒ Other Change Certificate Type to "Post-Associate Certificate" from "Advanced Certificate"

Show all changes on the attached program sheet if possible.

Rationale for Proposed Changes: This certificate was designed for students who have already completed the Computer Networking (APCNTM) Associate in Applied Science Degree, consisting of:
1. Computer Networking Academy I (CVCNT)
2. Computer Systems Technology (CTCSTC)
2. General Education Requirements plus 1 -6 Additional Credits.

2.0 GPA

This program addresses advanced skills need for a job as a network administrator/engineer, where you will design, install, configure and troubleshoot Local and Wide Area Networks using Cisco equipment. The ~~course~~ *program* helps prepare you to pass the Cisco Certified Network Professional examinations.
The Certificate Title would have been originally "Post-Associate Certificate" but that classification did not exist in 1999, when the original forms were submitted (See attached copy of original form, and also modified form from 2002/2003 catalog)..

3. Financial/Staffing/Equipment/Space Implications:
None.

4. Has the department consulted with all departments that may be impacted? Yes ☒ No ☐ NA ☐

Comments:

Signatures:

Reviewer	Print Name	Signature	Date
Program Change Initiator:	John Trame	*(signature)*	11/19/2002
Department Chair:	GARY DOWNEN	*(signature)*	11/27/02
Division Dean:	Rosemary Wilson	*(signature)*	12/4/02
VP, Instruction/Student Services:		*(signature)*	4/9/03

Access Program File___4/14___ Log___4/14___ Copied and Returned _____
Copies: Initiator, Department Chair, Dean, Curriculum File New Listing to: Counseling; Admissions
Curriculum and Articulation Services:
Curriculum Development\Forms\Programs\Program Change Form 1/9/01

Document Code: WPM$4472.doc

Computer Systems

Computer Networking Academy II (CPCNTA)
Post-Associate Certificate

Program Effective Term: Fall 2003

This Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Business and Computer Technologies Division
Computer Instruction Department and Electronics Department

Advisors: Michael Galea, James Lewis, John Trame

Program Admission Requirements:
Students must complete the Computer Networking Associate (APCNTM) degree program with a GPA of 2.0 or better.

Major/Area Requirements (16 Credits)

CNT 246	Advanced Routing Configuration	4
CNT 256	Remote Access Networks	4
CNT 266	Multi-Layer Switching	4
CNT 276	Network Troubleshooting	4

Minimum Credits Required for the Program: 16

Kathy,

Recently you and I had a conversation about the Computer Networking certificate programs. It had been discovered that your office was not aware of the name changes from Networking Technology I & II to Networking Academy I & II in Fall 2001. I have made changes to the curriculum database to keep it consistent with the Banner records. The charts below show the "before" and "after" pictures of the curriculum database.

Original Curriculum Records

Year	Code	Program Title
2000-2001	CVCNT CVCNTA	Computer Networking Technology I Computer Networking Technology II
2001-2002	CVCNT CVCNTA	Computer Networking Academy I Computer Networking Academy II
2002-2003	CVCNT CVCNTA	Computer Networking Academy I Computer Networking Academy II
2003-2004	CVCNT CPCNTA	Computer Networking Academy I Computer Networking Academy II

Note: The information listed in previous catalogs has the same program codes and names as on the chart above.

Revised Curriculum Records (match Banner)

Year	Code	Program Title
2000-2001	CVCNT CVCNTA	Computer Networking Technology I Computer Networking Technology II
2001-2002	CVCNT CVCNTA	Computer Networking Technology I Computer Networking Technology II
2002-2003	CVCNT CVCNTA	Computer Networking Technology I Computer Networking Technology II
2003-2004	**CVCNA1 CPCNA2**	**Computer Networking Academy I Computer Networking Academy II**

11/21/03

Computer Networking Academy II (CVCNTA)
Advanced Certificate

Program Effective Term: Fall 2002

This Cisco Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Business and Computer Technologies Division
Computer Instruction Department and Electronics Department

Advisors: Michael Galea, James Lewis, John Trame

Program Admission Requirements:
Completion of the Computer Networking Academy I (CVCNT) program with a GPA of 2.0 or better.

Major/Area Requirements	**(20 Credits)**	
CNT 246	Advanced Routing Configuration	5
CNT 256	Remote Access Networks	5
~~CNT 266~~	~~Multi-Layer Switching~~	4
CNT 266	Multi-Layer Switching	5
CNT 276	Network Troubleshooting	5

Minimum Credits Required for the Program: 20

Melissa,

Will you send a program change
form to

WASHTENAW COMMUNITY COLLEGE
PROGRAM CHANGE FORM

Program Code: **Program Name:**

CVCNTA   **Computer Networking Academy II**

Effective Term: Fall ~~Winter 2003~~ 2003

Directions: Attach the current program listing from the WCC catalog and indicate any changes that you would like to make. Draw lines through anything that should be deleted and write in additions. Extensive narrative changes may be included on a separate sheet. Check the boxes below for each type of change being proposed. If you are making changes to courses or proposing new courses as part of this proposal, they must be approved separately using a Course-Syllabus Approval Form (CSAF). Courses that are being discontinued also should be submitted on CSAF forms.

1. Requested Changes:

☐ Remove _____ Course(s)
☐ Add _____ Course(s)
☒ Total Credits: Current Credits _16_ After Changes _20_
☐ Change Course Semester Sequencing
☐ Change Title (title was _____)
☐ Description

☐ Advisors
☐ Articulation Information
☐ Program Admission Requirements
☐ Continuing Eligibility Requirements
☐ Footnotes
☐ Other _____

Show all changes on the attached program sheet.

2. Rationale for Proposed Changes:

The 2002-2003 Bulletin had an error in the requirements of the program. All classes in the program went from 4 credits each to 5 credits each.
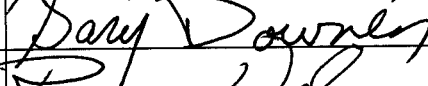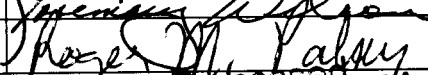
3. Financial/Staffing/Equipment/Space Implications:

None.

4. Has the department consulted with all departments that may be impacted?   Yes ☒   No ☐   NA ☐

Comments:

Signatures:

Reviewer	Print Name	Signature	Date
Program Change Initiator:	Gary Downen	*[signature]*	8/5/02
Department Chair:	Gary Downen	*[signature]*	8/5/02
Division Dean:	Rosemary Wilson	*[signature]*	8/6/02
Executive Vice President, Instruction	Roger M. Palay	*[signature]*	8/6/02

Curriculum and Articulation Services:
Curriculum Development\Forms\Program Forms\Program Change Form v2.3.doc 6/18/02

Processed.

[stamp] Office of Curriculum & Articulation Services

Access Program File_____ Log 8/6/02__ Copied and Returned _____
Copies: Initiator, Department Chair, Dean, Curriculum Files
New Listing to: Counseling; Admissions, Student Records

File Name: V19RDCH0.doc

Computer Systems

Computer Networking Academy II (CVCNTA)
Advanced Certificate

Program Effective Term: Fall 2002

This Cisco Networking Academy program provides you with the advanced skills needed for a job as a network administrator/engineer, where you will design, install, configure, and troubleshoot Local and Wide Area Networks. The focus is placed on internetworking hardware. It also prepares you to pass the Cisco Certified Network Professional examinations.

Business and Computer Technologies Division
Computer Instruction Department and Electronics Department

Advisors: Michael Galea, James Lewis, John Trame

Program Admission Requirements:
Completion of the Computer Networking Academy I (CVCNT) program with a GPA of 2.0 or better.

Major/Area Requirements		(20 Credits)
CNT 246	Advanced Routing Configuration	5
CNT 256	Remote Access Networks	5
CNT 266	Multi-Layer Switching	5
CNT 276	Network Troubleshooting	5
Minimum Credits Required for the Program:		**20**

WASHTENAW COMMUNITY COLLEGE
PROGRAM AUTHORIZATION FORM

1. **Program Title:** Computer Networking Technology **Program Code:** CNT

2. **Division:** BUS/TEC 3. **Department:** CISD/ELED **CIP Code:**

4. **Type of Program:** ☐ A.A. ☐ A.S. ☐ A.A.S. ☐ A.T.S.

   ☒ Advanced Certificate ☐ Mastery Certificate ☐ Achievement Certificate ☐ Certificate of Completion

5. **Will this program be Perkins funded?** ☒ yes ☐ no 6. **Effective Year:** F99

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7. **Program Description (for Catalog, brochures, etc.:**

This is an advanced certificate program in Networking. The program will provide two options: (a) Novell Technician, and (b) Microsoft Technician. These options will provide the students with the knowledge and skills to install, configure, and troubleshoot Local Area Networks. as well as pass the first required exam (Networking Technologies or Networking Essentials) for either the Novell Certified NetWare Engineer or Microsoft Certified Systems Engineer.

---

8. **Advisors:** Gary Downen, Charles Finkbeiner, Michael Galea, Phil Geyer, Usha Jindal, Laurence Krieg, Roland Meade, John Rinn, John Trame, Catherine Wagner

9. Admissions Criteria:	10. Criteria for Continuing Program Eligibility:
Completion of the Computer Systems Technology Certificate, or equivalent experience.	

11. **Attach a Program Approval Document [PAD], which includes the following:**

A. Program Description
B. Program Goals
C. Needs Assessment

D. Enrollment Projections
E. Program Cost Analysis
F. Course Descriptions

G. Analysis of Affected Instructional Units
H. Articulations
I. Licensure/Accreditation

Approval Recommended:	Print Name	Signature	Date
Program Initiator:	John Trame/Michael Galea		
Department Chair/Director:	John Trame/Roland Meade		3/19/99
Dean:	Roger Bertoia/Bella Parker		
VP, Instruction/Student Services:	Guy Altieri		4/25/99
President:	Larry Whitworth		5/6/99

Date of Board Approval: April 27, 1999

Available on disk

Program Approval Document

Advanced Certificate
Type of Degree or Certificate
In

COMPUTER NETWORKING
TECHNOLOGY
Name of Program

Prepared by
John Trame
And
Michael Galea

Washtenaw Community College
DATE: March 16, 1999

COURSE REQUIREMENTS FOR PROGRAM

Course	Title	Credit	Pre-requisites/Co-requisites
	Novell NetWare® Option		
CNT 200	Networking Fundamentals	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 210	NetWare Administration	3	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 215	Structured Cabling Systems and Documentation	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 220	Advanced NetWare Administration	3	CNT 210
CNT 225	Switching and Routing Techniques	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
	Microsoft Windows® NT Option		
CNT 200	Networking Fundamentals	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 211	Administering Microsoft Windows NT Server	3	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 215	Structured Cabling Systems and Documentation	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
CNT 221	Supporting Microsoft® Windows NT Server Core Technologies	3	CNT 211
CNT 225	Switching and Routing Techniques	4	Prerequisite: Completion of the Computer Systems Technology Certificate, or equivalent experience
	Total Credits:	~~16-17~~ 18	

A. PROGRAM DESCRIPTION

This certificate program trains individuals for employment as network service technicians. The program thoroughly prepares the student to pass either the Novell NetWare Administration and Advanced Administration or Microsoft Core Technologies exam. The program covers core hardware skills including configuring, installing, diagnosing, repairing, upgrading and maintaining networks. In addition, cabling systems and network documentation, as well as Network Operating Systems (MS Windows NT, or Novell NetWare) are covered in depth.

B. PROGRAM GOALS

This program is designed to educate students in the field of computer network cabling and administration. Students will learn how to install, and document, copper and fiber optic cabling systems in accordance with current cabling standards. Students will also learn how to set up, and administer network clients and servers. Graduates of this program will be employable as network cable installers, network specialists, or entry level network administrators.

C. NEEDS ASSESSMENT

Studies abound at the national; state and local level, documenting the tremendous need for network technicians, and engineers for government, education, business and industry. The local need for Washtenaw County is documented in the ICARD study of 1998. . Salaries for graduates of this program are expected to start at $30,000 per year
See attachment A.

D. ENROLLMENT PROJECTIONS

The fall of 1999 should see enrollments of approximately 120 students.
Enrollment should increase approximately twenty percent per year, for four to five years, at which point enrollment should stabilize. Steady enrolments should be maintained for approximately ten years, at which time we may notice a gradual decrease for up to five years. Stability is expected to set in once more, with a significant number of employees returning for updated education/retraining.

E. PROGRAM COST ANALYSIS

This certificate is a subset of the Advanced Computer Networking Technology Certificate. Therefore, this program does not have a separate budget. As a result, program costs are included in the Program Approval Document for the Advanced Computer Networking Technology Certificate.

F. COURSE DESCRIPTIONS

Novell® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Networking Technologies Course 565 (WCC title is Network Concepts)	18	CNT200	2	2	All the basics of computer networking, including terms and concepts. Networking technology — how it works, and why it works — is made clear in this course, where concepts like contemporary network services, transmission media, and protocols are explained. Learn how protocols are used in networking implementations from many vendors, especially those most common in today's LANs and WANs.
NetWare® 5 Administration Course 560	30	CNT210	3	5	This course is designed to provide students with the necessary knowledge and skills to perform competently in the role of network administrator or system manager for NetWare ® 5. Students completing this course will be able to accomplish fundamental network management tasks on a NetWare® 5 network. **Note:** Formerly CIS 125

Novell® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Advanced NetWare® 5 Administration Course 570	30	CNT220	3	5	Provides the knowledge and skills to design, configure and administer networks with NetWare® 5. This course gives you the advanced skills to upgrade previous versions of NetWare® to NetWare® 5, configure IP, use Java-based utilities, NetWare® Loadable Modules (NLMs), backup, and remote operations

Microsoft® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Networking Essentials Self-Paced Training Kit Course 578					The requirements for this course are fulfilled by CNT200 Network Concepts. This commercial version of this course is offered as self-paced training.
Administering Microsoft® Windows NT® 4.0 Course 803	18	CNT211	2	3	This course provides students with the knowledge and skills necessary to perform post-installation and day-to-day administration tasks in a single-domain or multiple-domain Microsoft® Windows NT®-based network. It also provides students with the prerequisite knowledge and skills required for course 687, Supporting Microsoft Windows NT 4.0-Core Technologies, and course 694, Microsoft Windows NT-Technical Support self-paced training.
Supporting Microsoft® Windows NT® 4.0 Core Technologies Course 922	30	CNT221	3	5	This course provides the core foundation for supporting Microsoft® Windows NT® operating system version 4.0. The goal of this course is to provide support professionals with the skills necessary to install, configure, customize, optimize, network, integrate, and troubleshoot Windows NT 4.0. Content primarily of interest in a complex environment-such as capacity planning on a server and a network, multiple domain management, and trust relationships--is covered in depth in a series of courses that makes up the Microsoft Windows NT Enterprise Series. Content specific to administration of the Windows NT Server network operating system can be found in the Administering Microsoft Windows NT 4.0 course

Core Hardware® Course Title	Training Hours	WCC Course	Credit Hours	Contact Hours	Description
Structured Cabling Systems and Documentation		CNT215	4	6	This course provides student with the knowledge and skills to design, install, document and troubleshoot stuctured cabling systems. . Topics include category 5 Unshielded Twisted Pair (UTP), Shielded Twisted Pair (STP), and fiber optic cabling.

Subject: RE: computer networking program names
Date: Tue, 20 Jul 1999 12:59:50 -0400
From: "Michael Galea" <mgalea@wccnet.org>
To: "Pat Cygnar" <pcygnar@orchard.washtenaw.cc.mi.us>

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I'm not crazy about I and II but they're better than the current names.
So it's OK with me.
-----Original Message-----
From:     Pat Cygnar [mailto:pcygnar@orchard.washtenaw.cc.mi.us]
Sent:     Tuesday, July 20, 1999 11:17 AM
To:       Mike Galea
Subject:          computer networking program names

Hi Mike,
Thanks for responding.  You and John both had the same suggestion, but
Guy is opposed to using the word professional in the title.  His other
suggestion is calling them Computer Networking I and II.  If you or John
are against this, the names will probably have to stay as they are for
now.  Let me know what you think.
Pat
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