I. CATALOG INFORMATION

A. Discipline: COMPUTER NETWORKING SYSTEMS ENGINEERING (CNSE)

B. Subject Code and Number: CNSE M37

C. Course Title: Exchange Server Implementation and Administration

D. Credit Course units:
   Units: 1.5
   Lecture Hours per week: 1
   Lab Hours per week : 1.5
   Variable Units : No

E. Student Learning Hours:
   Lecture Hours: Classroom hours: 17.5 - 17.5
   Laboratory/Activity Hours: Laboratory/Activity Hours 26.25 - 26.25
   Total Combined Hours in a 17.5 week term: 43.75 - 43.75

F. Non-Credit Course hours per week __________

G. May be taken a total of: 1 2 3 4 time(s) for credit

H. Is the course co-designated (same as) another course: No ☑ Yes ☐
   If YES, designate course Subject Code & Number: __________

I. Course Description:

   Provides an in-depth, hands-on introduction to the implementation and
   administration of Microsoft's latest Exchange Server. Topics include:
   recipient objects creation and management; exchange server maintenance;
   deployment of Outlook; access on MAPI-based clients, and access from internet-based clients.
   Also covers public folder creation and management; server backup procedures,
   server performance monitor, and connected sites link monitors configuration
   supporting Exchange Server in a single site or multisite enterprise environment;
   establishing messaging connectivity over the Internet; and supporting Web
   access to Exchange Server computers through Microsoft Outlook Web Access.

J. Entrance Skills

   *Prerequisite: No ☑ Yes ☐ Course(s)
   *Corequisite: No ☑ Yes ☐ Course(s)
   Limitation on Enrollment: No ☑ Yes ☐

   Recommended Preparation: No ☑ Yes ☐ Course(s)
II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

<table>
<thead>
<tr>
<th></th>
<th>methods of evaluation will be consistent with, but not limited by, the following types or examples.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>define and describe the basic components, products, and functions of Exchange Server.</td>
</tr>
<tr>
<td>2</td>
<td>describe how Exchange Server is integrated with Windows operating system.</td>
</tr>
<tr>
<td>3</td>
<td>describe the features of Exchange Server.</td>
</tr>
<tr>
<td>4</td>
<td>perform special Exchange Server installation with previous versions.</td>
</tr>
<tr>
<td>5</td>
<td>perform special Exchange Server installation in clustered environments.</td>
</tr>
</tbody>
</table>

Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area.
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Content</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>describe how Microsoft Outlook is deployed across an enterprise to access Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>9</td>
<td>describe how MAPI (Messaging Application Program Interface)-based clients are able to access Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>10</td>
<td>describe how MAPI-based clients are able to access Exchange Server in Internet Protocol environment</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>11</td>
<td>describe the functionality that is provided by the integration of Internet Information Server (IIS) with Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>12</td>
<td>list the main components of Exchange System Manager that are used for administering Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>13</td>
<td>demonstrate how to create recipient objects.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>14</td>
<td>demonstrate how to create and manage storage groups and stores.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>15</td>
<td>describe the role of SMTP, Extension to SMTP, and DNS in Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>16</td>
<td>define message routing and routing groups.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
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<tr>
<td>17</td>
<td>configure public folder permissions for the parent folder.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>18</td>
<td>demonstrate how to create and monitor a public folder replica and enable a public folder referral.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>19</td>
<td>describe the tools that are used to monitor the performance of a computer running Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>20</td>
<td>describe how to implement Microsoft Outlook forms with Exchange Server.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
<tr>
<td>21</td>
<td>describe the benefits of Microsoft Outlook Web access.</td>
<td>Quizzes, midterms, and final exam; Classroom project work demonstrating competency in this area</td>
</tr>
</tbody>
</table>

### III. COURSE CONTENT

<table>
<thead>
<tr>
<th>Estimated %</th>
<th>Topic</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture (must total 100%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.00%</td>
<td>Introduction to Microsoft Exchange Server</td>
<td>1</td>
</tr>
<tr>
<td>5.00%</td>
<td>Integration with Microsoft Windows Operating System</td>
<td>2</td>
</tr>
<tr>
<td>5.00%</td>
<td>Microsoft Exchange Server Architecture</td>
<td>3, 7, 8</td>
</tr>
<tr>
<td>5.00%</td>
<td>Planning the Microsoft Exchange Server Installation</td>
<td>4, 5, 7</td>
</tr>
<tr>
<td>5.00%</td>
<td>Installing Microsoft Exchange Server</td>
<td>4, 5, 6</td>
</tr>
<tr>
<td>4.00%</td>
<td>Coexistence with Previous Microsoft Exchange Server Versions</td>
<td>4, 6</td>
</tr>
<tr>
<td>5.00%</td>
<td>Microsoft Exchange Server in Clustered Environments</td>
<td>7</td>
</tr>
<tr>
<td>5.00%</td>
<td>Internet-Based Client Access</td>
<td>9, 10</td>
</tr>
<tr>
<td>4.00%</td>
<td>Management Tools for Microsoft Exchange Server</td>
<td>19</td>
</tr>
<tr>
<td>4.00%</td>
<td>Creating and Managing Recipients</td>
<td>13</td>
</tr>
<tr>
<td>5.00%</td>
<td>Managing the Server Configuration</td>
<td>11, 12, 13, 14, 15, 16, 17</td>
</tr>
<tr>
<td>Percentage</td>
<td>Topic</td>
<td>Notes</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------</td>
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</tr>
<tr>
<td>5.00%</td>
<td>SMTP Transport Configuration</td>
<td>15</td>
</tr>
<tr>
<td>5.00%</td>
<td>Message Routing Administration</td>
<td>16</td>
</tr>
<tr>
<td>5.00%</td>
<td>Public Folder Management</td>
<td>17, 18</td>
</tr>
<tr>
<td>4.00%</td>
<td>Public Folder Replication</td>
<td>17, 18</td>
</tr>
<tr>
<td>5.00%</td>
<td>Implementing Advanced Security</td>
<td>4, 8, 12</td>
</tr>
<tr>
<td>4.00%</td>
<td>Microsoft Outlook Forms Environment</td>
<td>20, 21</td>
</tr>
<tr>
<td>4.00%</td>
<td>Microsoft Outlook Web Access</td>
<td>21</td>
</tr>
<tr>
<td>4.00%</td>
<td>Microsoft Outlook Deployment</td>
<td>8, 9, 10, 11</td>
</tr>
<tr>
<td>6.00%</td>
<td>MAPI-Based Clients</td>
<td>9, 10</td>
</tr>
<tr>
<td>7.00%</td>
<td>Microsoft Exchange Server Maintenance and Troubleshooting</td>
<td>14, 19</td>
</tr>
</tbody>
</table>

**Lab (must total 100%)**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Task</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.00%</td>
<td>Installing Exchange Server</td>
<td>4, 5, 6</td>
</tr>
<tr>
<td>15.00%</td>
<td>Install Exchange Server in a clustered environment</td>
<td>4, 7</td>
</tr>
<tr>
<td>10.00%</td>
<td>Configure MAPI on Exchange Server to support MAPI-based clients</td>
<td>8, 9, 10</td>
</tr>
<tr>
<td>10.00%</td>
<td>Configure Exchange System Manager</td>
<td>12</td>
</tr>
<tr>
<td>20.00%</td>
<td>Configure Exchange Server to support IIS, DNS, SMTP, and email extensions</td>
<td>10, 11, 15</td>
</tr>
<tr>
<td>10.00%</td>
<td>Provide security and performance tuning on Exchange Server</td>
<td>17, 18, 20</td>
</tr>
<tr>
<td>10.00%</td>
<td>Configure Exchange Server to support a variety of email clients</td>
<td>6, 8, 10, 11, 21</td>
</tr>
</tbody>
</table>

**IV. TYPICAL ASSIGNMENTS**

**A. Writing assignments**

Writing assignments are required. Possible assignments may include, but are not limited to:

1. research and write a term paper of course-related topics.
2. short answer class assignments.

**B. Appropriate outside assignments**

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:

1. assigned writings.
2. field observations of this technology as implemented in local companies.
3. assigned simulation from text.
4. assignment readings from text and other sources.
C. **Critical thinking assignments**

| 1 | plan and implement an exchange email system based on system design criteria. |

**V. METHODS OF INSTRUCTION**

Methods of instruction may include, but are not limited to:

- [ ] Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)
- [x] Lecture/Discussion
- [x] Laboratory/Activity
- [x] Other (Specify) Online materials, study guides, laboratory projects.
- [ ] Optional Field Trips
- [ ] Required Field Trips

**VI. METHODS OF EVALUATION**

Methods of evaluation may include, but are not limited to:

- [x] Essay Exam
- [x] Problem Solving Exam
- [x] Objective Exams
- [x] Classroom Discussion
- [x] Reports/Papers/Journals
- [x] Skill Demonstration
- [ ] Participation
- [ ] Other (specify)

Assess troubleshooting skills in a lab environment.

**VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS**


**VIII. STUDENT MATERIALS FEES**

- [x] No
- [ ] Yes

**IX. PARALLEL COURSES**

<table>
<thead>
<tr>
<th>College</th>
<th>Course Number</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerritos College</td>
<td>CIS 213G</td>
<td>Microsoft Exchange Server Administration</td>
<td>3.5</td>
</tr>
<tr>
<td>Napa Valley College</td>
<td>CISN 150</td>
<td>Exchange Server Administration</td>
<td>3</td>
</tr>
<tr>
<td>Diablo Valley</td>
<td>CNT 138</td>
<td>Implementing and Managing Microsoft Exchange</td>
<td>3</td>
</tr>
</tbody>
</table>
X. MINIMUM QUALIFICATIONS

Courses in Disciplines in which Masters Degrees are not expected:
any bachelor's degree and two years of experience and related Microsoft certification, or any
associate degree and six years of experience and related Microsoft certification.

XI. ARTICULATION INFORMATION

A. Title V Course Classification:
   1. This course is designed to be taken either:
      
      ☐ Pass/No Pass only (no letter grade possible); or
      ☒ Letter grade (P/NP possible at student option)

   2. Degree status:
      Either ☐ Associate Degree Applicable; or ☒ Non-associate Degree Applicable

B. Moorpark College General Education:
   1. Do you recommend this course for inclusion on the Associate Degree
      General Education list?  Yes: ☐ No: ☒ If YES, what section(s)?
      ☐ A1 - Natural Sciences - Biological Science
      ☐ A2 - Natural Sciences - Physical Science
      ☐ B1 - Social and Behavioral Sciences - American History/Institutions
      ☐ B2 - Social and Behavioral Sciences - Other Social Behavioral Science
      ☐ C1 - Humanities - Fine or Performing Arts
      ☐ C2 - Humanities - Other Humanities
      ☐ D1 - Language and Rationality - English Composition
      ☐ D2 - Language and Rationality - Communication and Analytical Thinking
      ☐ E1 - Health/Physical Education
      ☐ E2 - PE or Dance
      ☐ F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:
   1. Do you recommend this course for transfer credit to CSU?  Yes: ☒ No:

   2. If YES do you recommend this course for inclusion on the CSU General
      Education list?  Yes: ☐ No: ☒ If YES, which area(s)?
      ☐ A1 ☐ A2 ☐ A3 ☐ B1 ☐ B2 ☐ B3 ☐ B4 ☐ C1 ☐ C2 ☐ D1 ☐ D2 ☐ D3 ☐ D4 ☐ D5
      ☐ D6 ☐ D7 ☐ D8 ☐ D9 ☐ D10 ☐ E
D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC?  Yes:  ☐ No:  ☒

2. If YES do you recommend this course for the Intersegmental General Education Transfer Curriculum (IGETC)?  Yes:  ☐ No:  ☒

IGETC Area 1: English Communication
☐ English Composition
☐ Critical Thinking-English Composition
☐ Oral Communication

IGETC Area 2: Mathematical Concepts and Quantitative Reasoning
☐ Mathematical Concepts

IGETC Area 3: Arts and Humanities
☐ Arts
☐ Humanities

IGETC Area 4: Social and Behavioral Sciences
☐ Anthropology and Archaeology
☐ Economics
☐ Ethnic Studies
☐ Gender Studies
☐ Geography
☐ History
☐ Interdisciplinary, Social & Behavioral Sciences
☐ Political Science, Government & Legal Institutions
☐ Psychology
☐ Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)
☐ Physical Science Lab or Physical Science Lab only (non-sequence)
☐ Physical Science Lecture only (non-sequence)
☐ Biological Science
☐ Physical Science Courses
☐ Physical Science Lab or Biological Science Lab Only (non-sequence)
☐ Biological Science Courses
☐ Biological Science Lab course
☐ First Science course in a Special sequence
☐ Second Science course in a Special Sequence
☐ Laboratory Activity
XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources:
Possible term paper assignments requiring research using the Library's print
and online resources.

B. Are the currently held library resources sufficient to support the course
assignment?

YES: [X] NO:

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

CNSE M37: Not Applicable

XIV. WORKPLACE PREPARATION

Required for career technical courses only. A career technical course/program is one with
the primary goal to prepare students for employment immediately upon course/program
completion, and/or upgrading employment skills.

Detail how the course meets the Secretary of Labors Commission on the Achievement of
Necessary Skills (SCANS) areas. (For a description of the competencies and skills with a
listing of what students should be able to do, go to:
http://www.ncrel.org/sdrs/areas/issues/methods/assment/as7scans.htm)

The course will address the SCANS competency areas:

1. Resources: the students will identify, organize, plan and allocate resources
through course work and application of theory to practice.

2. Interpersonal: the students will work together as a team to build, evaluate
projects, and solve technical problem scenarios.

3. Information: the students will acquire and use information through a variety of
assignments, administration tools, and computer software used in computer
email systems.

4. Systems: the students will employ a variety of computer tools to complete
projects or resolve email configuration problems.

5. Technology: the students will use modern technology to acquire the skills needed
to prepare for a career.

The course also addresses the SCANS skills and personal qualities:
1. Basic Skills: the students will read, perform computer mathematic operations, listen and speak for weekly assignments and participate in classroom discussions.

2. Thinking Skills: the students will think creatively, make decisions, solve computer network problems and provide reasonable problem solving skills after satisfactorily completing this course.

3. Personal Qualities: the students will be required to display responsibility, self-management, integrity, and honesty throughout course work and classroom exercises.

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM
CNSE M37: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM
CNSE M37: Not Applicable

XVII. STUDENT MATERIALS FEE ADDENDUM
CNSE M37: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041
CNSE M37: Not Applicable

XIX. CURRICULUM APPROVAL
Course Information:

Discipline: COMPUTER NETWORKING SYSTEMS ENGINEERING (CNSE)

Discipline Code and Number: CNSE M37

Course Revision Category: Outline Update

Course Proposed By: Originating Faculty Edmond Garcia 01/24/2012
Faculty Peer: Martin Chetlen 02/06/2012
Curriculum Rep: Christine Aguilera 01/25/2012
Department Chair: Martin Chetlen 02/06/2012
Division Dean: Lisa Miller 01/25/2012

Approved By:
Curriculum Chair: Mary Rees 02/14/2012
Executive Vice President: Lori Bennett 02/24/2012
Articulation Officer: Letrisha Mai 02/13/2012
Librarian: Mary LaBarge 02/10/2012

Implementation Term and Year: Fall 2012

Approval Dates:
Approved by Moorpark College Curriculum Committee: 02/14/2012

Approved by Board of Trustees (if applicable): 

Approved by State (if applicable): 03/07/2012