

EXHIBIT B



**BOARD OF TRUSTEES
Bylaw, Policy, and Curriculum Committee Agenda Items**

To: Board of Trustees
From: Office of the President
Date: June 17, 2009

The following Bylaw, Policy, and Curriculum Committee items are recommended to the Ocean County College Board of Trustees for approval at its meeting on **Monday, June 22, 2009**:

1. Recommend approval of the following items as accepted by the College Senate at its meeting on June 3, 2009:
 - a. Revised Courses:
 - 1) BCET 124, Project Planning and Control (**Exhibit B-1**)
 - 2) BCET 134, Construction Methods and Pricing for Estimating (**Exhibit B-2**)
 - 3) CVET 231, Design of Structure (**Exhibit B-3**)
 - 4) CVET 232, Design of Concrete (**Exhibit B-4**)
 - 5) CVET 241, Soil Mechanics and Foundations (**Exhibit B-5**)
 - 6) CVET 254, Hydrology and Hydraulics (**Exhibit B-6**)
 - 7) CVET 256, Land Development and Site Planning (**Exhibit B-7**)
 - 8) ENGR 180, Computer-Aided Graphics: Basic Auto CAD (**Exhibit B-8**)
 - 9) ENGR 196, Geographic Information Systems (**Exhibit B-9**)
 - 10) ENGR 198, Autodesk Inventor (**Exhibit B-10**)
 - b. Ocean County College General Education Goals and Objectives (**Exhibit B-11**)
2. Recommend revision of Policy #7220, Special Programs, Educational Research Projects (**Exhibit B-12**)
3. Recommend the temporary suspension of Policy #3074, Alcohol- and Drug-Free Workplace, and Policy #5246.1, Campus Life, Drugs, during the hours of the Ocean County College Foundation Summer Gala, which is being held on campus on Saturday evening, September 12, 2009

EXHIBIT B-1

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF SCIENCE AND ENGINEERING

1. COURSE NUMBER AND TITLE: BCET-124: Project Planning and Control

2. SEMESTER HOURS: 3 CONTACT HOURS: (3 + 0)
Lecture Lab

3. CATALOG DESCRIPTION

Discusses project management policies, life cycle, organizational structures and models. Students will investigate budgeting, scheduling, resource allocation through the utilization of project networking such as PERT and CPM. Monitoring and information procedures are analyzed as fundamental elements for control and maintaining balance in meeting project objectives. Utilization of computer methods is covered to plan and monitor projects.

4. PREREQUISITES: BCET-134, CVET 161 or field experience COREQUISITES: None

5. MAXIMUM CLASS SIZE: 20 24 COURSE FEE CODE: 1
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: X vocational ___ non-vocational

6. JUSTIFICATION

a. Describe the need for this course

Individuals working in construction management can use this course to improve their project management skills.

b. Relationship to courses within the College

i. Does this course satisfy a general education requirement? ___ yes X no
If yes, mark with an "x" in the appropriate category below.

___ Communication ___ Social Science ___ Lab Science
___ Mathematics ___ Humanities

ii. Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees? ___ yes X no

If yes, mark with an "x" in the appropriate category: ___ Group A ___ Group B

iii. If the course does not satisfy a general education requirement, which of following does it satisfy:

___ Program-specific requirement for the following degree program:

X Elective

iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?
 ___ yes X no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

v. Does this course satisfy the computer literacy requirement? ___ yes X no

c. Related courses in other institutions

i. List any comparable course(s) by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution	Course Title	Course Number	Number of Credits	Comments

ii. If “None” was inserted, please explain.

iii. Complete the table below. The institutions listed comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
Institution	Course Code, Title, and Credits	Transfer Category (Major, General Ed., or Elective)	Will NOT Transfer (Place an “x” in box)	Unable to Determine Status (Place “U” in box)
Rutgers-New Brunswick				
Georgian Court University				
Richard Stockton College				
Monmouth University				
Kean University				
Rowan University				

- iv. *If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).*
 - v. *If not transferable to any institution, explain.*
- d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College
- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
 - ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and life-long learning.*
- e. *Mark with an "x" the General Education goal(s) addressed by this course*

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. ~~Understand~~ **Describe** the role of estimating in the planning process.
- b. Create network diagrams using arrow notation.
- c. Create network diagrams using precedence notation.
- d. Determine the critical path in a network.
- e. Examine a network and determine the available float.
- f. Input a network into a project management computer program.
- g. Interpret the tabular and graphic output.

8. METHODS OF INSTRUCTION

Three hours of formal lecture and class discussion per week.

9. INSTRUCTIONAL MATERIALS /TECHNOLOGY NEEDS /HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate textbook will be selected. Please contact the Department Office for current adoptions.

Presently employed faculty can teach this course.

10. TENTATIVE TOPICAL OUTLINE

- ◆ The Estimate Process
- ◆ Scheduling Logic
- ◆ Calculating the Project Schedule
- ◆ Creating and Saving Projects
- ◆ Primavera Project Setup
- ◆ Loading the Schedule Logic
- ◆ Tabular and Graphic Output
- ◆ Summarizing the Schedule
- ◆ Updating the Schedule
- ◆ Resource Loading
- ◆ Cost Loading and Cash Flow
- ◆ Progress Planning and Control
- ◆ Project Analysis and Forecasting

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents.

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Co-requisites	#11 Grade Determinants

#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-2

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF SCIENCE AND ENGINEERING

1. COURSE NUMBER AND TITLE: BCET-134: Construction Methods and Pricing for Estimating
2. SEMESTER HOURS: 3 CONTACT HOURS: (3 + 0)
Lecture Lab
3. CATALOG DESCRIPTION

A course designed to introduce the student to the task of estimating as applied to a construction project. The estimating of material and labor costs will be studied, as well as intangibles such as taxes, insurance, bonding, overhead and profit. Each student will use P.C. driven spread sheets to track the various parts of a class project. The procedures of bidding, opening bids, awarding of contract and related items are covered.

4. PREREQUISITES: ~~Field Experience~~ None COREQUISITES: None
5. MAXIMUM CLASS SIZE: ~~46~~ 24 COURSE FEE CODE: 0
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: vocational non-vocational

6. **JUSTIFICATION**

a. *Describe the need for this course*

Individuals working in construction management can use this course to improve their estimating skills.

b. *Relationship to courses within the College*

- i. *Does this course satisfy a general education requirement?* yes no
If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Mathematics Humanities

- ii. *Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees?* yes no

If yes, mark with an "x" the appropriate category. Group A Group B

- iii. *If the course does not satisfy a general education requirement, which of the following does it satisfy:*

Program-specific requirement for the following degree program:

X Elective

iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?
 ___ yes X no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

v. Does this course satisfy the computer literacy requirement? ___ yes X no

c. Related courses in other institutions

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution	Course Title	Course Number	Number of Credits	Comments

ii. If “None” was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
Institution	Course Code, Title, and Credits	Transfer Category (Major, General Ed., or Elective)	Will NOT Transfer (Place an “x” in box)	Unable to Determine Status (Place “U” in box)
Rutgers – New Brunswick				
Georgian Court University				
Richard Stockton College				
Monmouth University				

<i>Kean University</i>				
<i>Rowan University</i>				

- iv. *If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).*
- v. *If not transferable to any institution, explain.*

d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College

- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
- ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and life-long learning.*

e. Mark with an "x" the General Education goal(s) addressed by this course

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. Develop an estimate from a set of plans.
- b. Calculate the amounts of soil for site work.
- c. Calculate and price quantities of concrete needed for specific jobs.
- d. Calculate and price quantities for masonry work.
- e. Price subcontractors work.
- f. Price general expenses.
- g. Create a bid for a contract

8. METHODS OF INSTRUCTION

Three hours of formal lecture and class discussion per week

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate textbook will be selected. Please contact the Department Office for current adoptions.

Presently employed faculty can teach this course.

10. TENTATIVE TOPICAL OUTLINE

- Introduction to Construction Estimating
- The Estimating Process and Procedures
- Measuring Quantities Generally
- Measuring Site work, Excavation and Piling
- Measuring Concrete Work
- Measuring Masonry Work
- Measuring Carpentry and Miscellaneous
- Pricing Generally
- Pricing Construction Equipment
- Pricing Excavation and Backfill
- Pricing Concrete Work
- Pricing Masonry, Carpentry and Finish Work
- Pricing Subcontractors' Work
- Pricing General Expenses
- Closing the Bid

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline

#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-3

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF ENGINEERING

1. COURSE NUMBER AND TITLE: CVET-231: Design of Structure
2. SEMESTER HOURS: 4 s.h. CONTACT HOURS: (3 + 3)
Lecture Lab
3. CATALOG DESCRIPTION:

Shear and bending moment diagram, analysis of static load, stresses, strains and deflections of determinate structural members built up sections. Steel design of basic beams. Columns, connections of structural elements. Detailing of beam, columns, product section, plans and specifications

4. PREREQUISITES: CVET-151 and CVET-152 CO-REQUISITES: None
5. MAXIMUM CLASS SIZE: ~~18~~ 24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: vocational non-vocational

6. *Justification*

a. *Describe the need for this course.*

Steel design of basic beams, columns, and connections of structural elements are required of employees of civil engineering firms.

b. *Relationship to courses within the College*

- i. *Does this course satisfy a general education requirement?* yes no
If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Mathematics Humanities

- ii. *Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees?* yes no

If yes, mark with an "x" the appropriate category. Group A Group B

- iii. *If the course does not satisfy a general education requirement, which of the following does it satisfy:*

Program-specific requirement for the following degree program:

Elective

- iv. *Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?*

___ yes x no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

v. Does this course satisfy the computer literacy requirement? ___ yes x no

c. **Related courses in other institutions**

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
<i>Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)</i>	<i>Course Title</i>	<i>Course Number</i>	<i>Number of Credits</i>	<i>Comments</i>

ii. If “None” was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
<i>Institution</i>	<i>Course Code, Title, and Credits</i>	<i>Transfer Category (Major, General Ed., or Elective)</i>	<i>Will NOT Transfer (Place an “x” in box)</i>	<i>Unable to Determine Status (Place “U” in box)</i>
<i>Rutgers – New Brunswick</i>				
<i>Georgian Court University</i>				
<i>Richard Stockton College</i>				
<i>Monmouth University</i>				

<i>Kean University</i>				
<i>Rowan University</i>				

- iv. *If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).*
- v. *If not transferable to any institution, explain.*

d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College

- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
- ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and life-long learning.*

e. Mark with an "x" the General Education goal(s) addressed by this course:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

~~To perform tasks described in catalog description and topical outline.~~

- a. *Select structural products.*
- b. *Use data for structural design.*
- c. *Review shear and moment diagrams.*
- d. *Demonstrate skill with regard to design applications and design requirements.*
- e. *Identify design specifications.*
- f. *Design wood and steel structures.*

8. METHODS OF INSTRUCTION

Three hours of formal lecture and class discussion and three hours of laboratory per week. Concepts will be explained and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate text will be selected. Contact the department for current adoptions.

10. TENTATIVE TOPICAL OUTLINE

- a. General concerns for wood, types of structural products, data for structural design, use of tables, modification factors.
- b. Wood beams, joists, decks, flexure formula, review shear & moment diagrams.
- c. Wood design applications, additional design requirements.
- d. Deflection in beams, intro to computer applications in shear, moment & deflection.
- e. Wood columns, natural design specifications.
- f. Wood columns, use of tables, applications to poles, built up columns.
- g. Fasteners & connections, nails, spikes, screws & lab bolts, bolts, design tables.
- h. Special wood structures, trusses, flitched beams
- i. Steel structures, also specifications, structural shapes, standard designations, usage considerations.
- j. Steel beam analysis & design procedures for bending, use of flexure formula, stability considerations, torsional buckling, use of tables and computer programs.
- k. Shear in beams, bearing and web crippling, compact sections, roof & floor systems.
- l. Steel columns, load calculation using AISC code calculations.
- m. Steel connections, bolt capacity, organization of connections, code requirements, connection capacity.

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline

#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-4

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF ENGINEERING

1. COURSE NUMBER AND TITLE: CVET-232: Design of Concrete
2. SEMESTER HOURS: 4 s.h. CONTACT HOURS: (3 + 3)
Lecture Lab
3. CATALOG DESCRIPTION:

Analysis and design of basic reinforced concrete beams, slabs, columns and shear design in beams. Development, splices, and simple-span bar cutoffs. Continuous construction design considerations. Laboratory: physical and mechanical tests of cements, mortar and aggregates, concrete mix design, beam experiments and test reports.

4. PREREQUISITES: CVET-231: Design of Structure
CO-REQUISITES: None
5. MAXIMUM CLASS SIZE: 24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: *vocational* *non-vocational*

6. *Justification*

- a. *Describe the need for this course.*

Analysis and design of basic reinforced concrete beams, slabs, columns and shear design in beams are required of employees of civil engineering firms.

- b. *Relationship to courses within the College*

- i. *Does this course satisfy a general education requirement?* *yes* *no*
If yes, mark with an "x" the appropriate category below.

Communication *Social Science* *Lab Science*
 Mathematics *Humanities*

- ii. *Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees?* *yes* *no*

If yes, mark with an "x" the appropriate category. *Group A* *Group B*

- iii. *If the course does not satisfy a general education requirement, which of the following does it satisfy:*

Program-specific requirement for the following degree program:

Elective

- iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?
 ___ yes x no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

- v. Does this course satisfy the computer literacy requirement? ___ yes x no

c. **Related courses in other institutions**

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

- i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
<i>Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)</i>	<i>Course Title</i>	<i>Course Number</i>	<i>Number of Credits</i>	<i>Comments</i>

- ii. If “None” was inserted, please explain.
 iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
<i>Institution</i>	<i>Course Code, Title, and Credits</i>	<i>Transfer Category (Major, General Ed., or Elective)</i>	<i>Will NOT Transfer (Place an “x” in box)</i>	<i>Unable to Determine Status (Place “U” in box)</i>
<i>Rutgers – New Brunswick</i>				
<i>Georgian Court University</i>				
<i>Richard Stockton College</i>				

<i>Monmouth University</i>				
<i>Kean University</i>				
<i>Rowan University</i>				

- iv. *If a “U” was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).*
- v. *If not transferable to any institution, explain.*

d. *Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College*

- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
- ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and life-long learning.*

e. *Mark with an “x” the General Education goal(s) addressed by this course:*

- | | | |
|---|---|---|
| <input type="checkbox"/> 1. <i>Independent Thinking</i> | <input type="checkbox"/> 5. <i>Science & Social Science</i> | <input type="checkbox"/> 9. <i>Global Perspective</i> |
| <input type="checkbox"/> 2. <i>Communication</i> | <input type="checkbox"/> 6. <i>Aesthetic Appreciation</i> | <input type="checkbox"/> 10. <i>Health & Well Being</i> |
| <input checked="" type="checkbox"/> 3. <i>Problem Solving</i> | <input type="checkbox"/> 7. <i>Historical Consciousness</i> | <input type="checkbox"/> 11. <i>Civic Responsibility</i> |
| <input type="checkbox"/> 4. <i>Ethical Judgment</i> | <input type="checkbox"/> 8. <i>Diversity</i> | <input checked="" type="checkbox"/> 12. <i>Technology</i> |
| | | <input type="checkbox"/> 13. <i>Lifelong Learning</i> |

7. **SPECIFIC COURSE LEARNING OBJECTIVES**

Students who successfully complete this course will be able to *demonstrate proficiency with regard to:*

~~Perform tasks and solve problems in accordance with the catalog description and the topical outline.~~

- a. *Materials in concrete, admixtures, and properties of concrete.*
- b. *ACI code applications.*
- c. *One-way slab analysis and design.*
- d. *Deflection control in slabs with design applications.*
- e. *Doubly reinforced beams design.*
- f. *Continuous construction design, continuous-span bar cutoffs, and floor systems.*

8. METHODS OF INSTRUCTION

Three hours of formal lecture and class discussion and three hours of laboratory per week. Concepts will be explained and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate text will be selected. Contact the department for current adoptions.

10. TENTATIVE TOPICAL OUTLINE

Materials in concrete, admixtures, properties of concrete.

ACI code applications.

Intro to strength method of design w/assumptions.

Flexure strength of rectangular beams, balanced, brittle, & ductile failure modes.

Tension only rectangular beam analysis.

One-way slab analysis & design.

Deflection control in slabs w/design applications.

Doubly reinforced beams design.

Shear in beams, reinforcement design requirements procedures for stirrup design.

Development lengths, splices, simple-span bar cutoffs, tension & compression.

Development length of hooks, tension splices.

Continuous construction design, continuous-span bar cutoffs, floor systems.

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline

#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-5

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF ENGINEERING

1. COURSE NUMBER AND TITLE: CVET 241: Soil Mechanics and Foundations
2. SEMESTER HOURS: 4 CONTACT HOURS: (3 + 3)
Lecture Lab
3. CATALOG DESCRIPTION

Formation of natural soil deposits, engineering properties of soils, soil exploration, stress distribution in soil, consolidation of soil and settlement of structures, shear strength of soil, shallow foundations, pile foundations. The application of this information to the design of shallow and deep (piles) foundations. Lateral earth pressure and soil compaction.

~~This course covers: (1) the formation of natural soil deposits, (2) the engineering properties of soils, (3) the exploration of subsurface conditions, (4) the potential settlement of structures, (5) the shear strength of soil, (6) an understanding of shallow foundations, (7) an introduction to pile foundations, and (8) the impact of hydro-geological phenomena on soil properties. The information throughout this course will be applied to the design of shallow and deep foundations, the analysis of lateral earth pressure situations and the understanding of soil compaction.~~

4. PREREQUISITES: CVET 152 COREQUISITES: None CVET 151
5. MAXIMUM CLASS SIZE: 18-24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

COURSE TYPE FOR PERKINS REPORTING: x vocational ___ non-vocational

6. JUSTIFICATION

a. Describe the need for this course.

- ~~i. An understanding of soil mechanics and foundation design is essential in the study of Civil Engineering works.~~
- ~~ii. A basic knowledge of this topic is required in the designs for structures, drainage and environmental impacts.~~
- ~~iii. This course is primarily related to the Civil Engineering field. A background of mathematics in algebra, trigonometry and elementary mechanics is necessary.~~
- ~~iv. This course is presented at a technical level commensurate with college academic standards using the rigor of mathematics and physical principals.~~

An understanding of soil mechanics and foundation design is essential in the study of Civil Engineering works. A basic knowledge of this topic is required in the designs for structures, drainage and environmental impacts.

b. Relationship to courses within the College

- i. Does this course satisfy a general education requirement for the Liberal Arts degree? yes no

If yes, mark with an "x" the appropriate category below.

- Communication Social Science Lab Science
 Humanities (If applicable: Group A Group B)
 Mathematics

- ii. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree? yes no

If yes, please explain:

 [The diversity requirement is defined as "any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought."]

- iii. Does this course satisfy a general education requirement for other Associate degrees? yes no

If yes, mark with an "x" the appropriate category below.

- Communication Social Science Lab Science
 Humanities Mathematics

- iv. If the course does not satisfy a general education requirement, which of the following does it satisfy:

Program-specific requirement for the following degree program:

 Elective

- v. Does this course satisfy the computer literacy requirement? yes no

c. Related courses in other institutions

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course's transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

- i. List any comparable course(s) at other community colleges by completing the table below. Insert "None" if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution	Course	Course	Number	Comments

<i>(ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)</i>	<i>Title</i>	<i>Number</i>	<i>of Credits</i>	

ii. If "None" was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

<i>Transferability of Proposed Course</i>				
<i>Institution</i>	<i>Course Code, Title, and Credits</i>	<i>Transfer Category (Major, General Ed., or Elective)</i>	<i>Will NOT Transfer (Place an "x" in box)</i>	<i>Unable to Determine Status (Place "U" in box)</i>
<i>Georgian Court University</i>				
<i>Kean University</i>				
<i>Monmouth University</i>				
<i>Richard Stockton College</i>				
<i>Rowan University</i>				
<i>Rutgers – New Brunswick</i>				

iv. If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).

v. If not transferable to any institution, explain.

d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College

- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
- ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and life-long learning.*

e. Mark with an "x" the General Education goal(s) addressed by this course:

- | | | |
|--|---|--|
| <input type="checkbox"/> 1. Independent Thinking | <input checked="" type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- Attain the ability to classify soils through actual fieldwork.
- ~~Understand~~ **Explain** the importance of soil settlement and compaction as it relates to civil works.
- Understand the various techniques and methods of underground soil exploration.
- ~~Gain knowledge of~~ **Discuss** hydro-geology factors as they relate to fluid flow through soils.
- ~~Develop insights in~~ **Describe and use** methods and procedures employed in cleanup of contaminated groundwater.
- Develop a working knowledge in the analysis of lateral earth pressure.
- ~~Understand~~ **Discuss** the design of shallow and deep foundations.

8. METHODS OF INSTRUCTION

Formal classroom lecture will be used to explain concepts. Students follow with hands-on laboratory sessions. Homework will be important to supplement the lectures.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate textbook will be selected. Please contact the department for current adoptions.

Presently employed faculty can teach this course.

10. TENTATIVE TOPICAL OUTLINE

- The Soil and Rock of Planet Earth: Geologic Overview
- Soil Composition: Terminology and Definitions
- Soil Types and Soil Structures
- Index Properties and Classification Tests. Soil Classification Systems
- Movement of Water Through Soil: Basic Hydrogeology, Subsurface Flow, Permeability and Capillarity
- Movement of Water Through Soil: Practical Effects – Seepage, Drainage, Frost, Heave Contamination
- Combined Stresses I Soil Masses: Stress at a Point and Mohr's Circle
- Subsurface Stresses

- i. Settlement: Soil Volume Change and Consolidation
- j. Shear Strength Theory
- k. Foundations: Introductory Concepts

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and five laboratory reports, in addition to extra assignments, homework, or the equivalents.

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

<i>Revision of the Following Items Must Be Sent to the Curriculum Committee</i>	<i>Revision of the Following Items Require No Approval</i>
<i>#1 Course Number & Title</i>	<i>#8 Methods of Instruction</i>
<i>#2 Semester Hours/Contact Hours</i>	<i>#9 Instructional Materials</i>
<i>#3 Catalog Description</i>	<i>#10 Tentative Topical Outline</i>
<i>#4 Prerequisites & Corequisites</i>	<i>#11 Grade Determinants</i>
<i>#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category</i>	<i>#12 Number of Papers and Examinations</i>
<i>#6 Justification</i>	
<i>#7 Course Objectives</i>	

EXHIBIT B-6

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF ENGINEERING

1. COURSE NUMBER AND TITLE: CVET 254: Hydrology and Hydraulics
2. SEMESTER HOURS: 4 CONTACT HOURS: (3 + 3)
Lecture Lab
3. CATALOG DESCRIPTION

Topics will explore the hydrologic cycle phenomena of precipitation, surface runoff and stream flow. Groundwater flow and well hydraulics are covered through a study of aquifers, recharge and safe yield. Open and closed channel flow principles through the use of energy and momentum equations to account for head losses and hydraulic jumps are discussed. Laboratory experiment demonstrating laminar and turbulent flow, orifice and weir parameter as means to measure fluid flow will reinforce theory.

4. PREREQUISITES: PHYS 171, CVET 161
COREQUISITES: None
5. MAXIMUM CLASS SIZE: ~~16~~ 24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

COURSE TYPE FOR PERKINS REPORTING: vocational non-vocational

6. JUSTIFICATION

a. Describe the need for this course.

With an ever increasing need for a more thorough evaluation of infrastructure designs as they relate to individual projects and their impact with respect to regional infrastructure, there is an increasing need for engineers with the ability to evaluate a project and determine reasonable design parameters for the design of hydraulic structures, sanitary sewer systems, storm water systems, flood control systems, potable water systems and to ensure that the interaction of these systems comply with the regulations that govern the design. As such, students will leave this course with a basic knowledge of these topics and understanding of their responsibility as engineers. With the oversight of an engineer, the students will also possess the ability to perform the calculations necessary to undertake projects related to these topics.

b. Relationship to courses within the College

- i. Does this course satisfy a general education requirement for the Liberal Arts degree? yes no

If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Humanities (If applicable: Group A Group B)

Mathematics

- ii. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree? yes x no

If yes, please explain:

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

- iii. Does this course satisfy a general education requirement for other Associate degrees? yes x no

If yes, mark with an “x” the appropriate category below.

 Communication Social Science Lab Science
 Humanities Mathematics

- iv. If the course does not satisfy a general education requirement, which of the following does it satisfy:

 Program-specific requirement for the following degree program:

 x Elective

- v. Does this course satisfy the computer literacy requirement? yes x no

c. **Related courses in other institutions**

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

- i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)	Course Title	Course Number	Number of Credits	Comments

- ii. If “None” was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
Institution	Course Code, Title, and Credits	Transfer Category (Major, General Ed. or Elective)	Will NOT Transfer (Place an "x" in box)	Unable to Determine Status (Place "U" in box)
<i>Georgian Court University</i>				
<i>Kean University</i>				
<i>Monmouth University</i>				
<i>Richard Stockton College</i>				
<i>Rowan University</i>				
<i>Rutgers – New Brunswick</i>				

- iv. If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).
- v. If not transferable to any institution, explain.

d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College

- ◆ This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.
- ◆ This course is consistent with the following goals of the college as expressed in the Academic Master Plan:
 - Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students
 - Establish a shared commitment to high and meaningful educational and ethical standards.
 - Prepare students for successful transfer to other educational institutions.
 - Prepare students for a rewarding life marked by personal growth and life long learning.

e. Mark with an "x" the General Education goal(s) addressed by this course:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. Apply the basic fundamental fluid mechanic equations and utilize the instruments.
- b. Demonstrate an understanding of as related to hydrostatics.
- c. Compute the pressure exerted on a structure at various depths.
- d. Calculate the buoyant force exerted on an object.
- e. Demonstrate an understanding of as related to hydrodynamics.
- f. Recognize the types of flow occurring.
- g. Compute the velocity and discharge of water flowing in a simple system.
- ~~h. Measure the velocity and flow from a simple system.~~
- i. Utilize Bernoulli's equation and the moody diagram. ~~to calculate the flow and velocity within a series and parallel pipe system.~~
- j. Demonstrate an understanding of hydraulic devices.
- k. Calculate the flow through an orifice and design a weir for specific parameters.
- l. Calculate the flow over a weir and design a weir for specific parameters.
- m. Demonstrate an understanding of open channel flow.
- ~~n. Compute normal depth in an open channel.~~
- ~~o. Compute critical depth in an open channel.~~
- ~~p. Demonstrate an ability to utilize pipe design charts.~~
- q. Demonstrate an understanding of culvert hydraulics.
- ~~r. Determine the adequacy of an existing channel or design a proposed channel for specific parameters.~~
- s. Analyze an existing culvert for inlet and outlet control.
- t. Size a culvert for specific design parameters.
- u. Demonstrate an understanding of the hydrologic cycle and the need to prepare adequate designs.
- v. Demonstrate the ability to read topographic maps and delineate a drainage basin.
- w. Calculate the time of concentration for a rainfall event in a specific drainage basin.
- ~~x. Estimate storm frequency for a given rainfall intensity.~~
- ~~y. Calculate a runoff hydrograph using a unit hydrograph.~~
- z. Demonstrate an understanding of the runoff calculations as required by Federal, State and Municipal regulatory bodies.
- ~~aa. Calculate peak runoff utilizing the Rational Method and the SCS Method.~~
- ~~bb. Calculate a runoff hydrograph by the Modified Rational Method.~~
- ~~cc. Calculate a runoff hydrograph by the SCS Method.~~
- dd. Demonstrate an understanding of a storm sewer design.
- ee. Delineate incremental drainage areas in a standard storm sewer design.
- ~~ff. Compute pipe sizes in a standard storm sewer design.~~
- gg. Perform the calculations as required and design a simple storm sewer system.
- hh. Demonstrate an understanding of storm water management.
- ii. Demonstrate an understanding of ground water flows and perform basic calculations.
- jj. Setup a spreadsheet and utilize Microsoft Excel to perform typical calculations

8. METHODS OF INSTRUCTION

One hour of formal lecture and class discussion and three hours of computer laboratory per week. Concepts will be explained and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

1. ***Text: An appropriate textbook will be selected. Please contact the department for current adoptions.***
~~Introduction to Hydraulics and Hydrology with Applications for Stormwater Management, 2nd Edition by John E. Gribbin~~
2. Handouts as taken from the NJDOT Highway Design Manual, NJ Residential Site Improvement Standards and the Natural Resources Conservation Service manuals.

Technology:

Human Resources Needs:

~~Presently Employed Faculty can teach this course.~~

10. TENTATIVE TOPICAL OUTLINE

- a. Hydraulics and Hydrology in Engineering - Legal and environmental issues, public agencies, an engineers responsibility and engineering computations.
- b. Fluid Mechanics – Fundamental concepts, Specific weigh and density, dynamic and kinematic viscosity.
- c. Fundamental Hydrostatics – Hydrostatic pressure on fully and partially submerged surfaces, pressure measurement and buoyancy.
- d. Fundamental Hydraulics – The motion of water, flow recognition, energy head and the conservation laws and an introduction to the Moody Diagram, the Reynolds Number and the use of pipe design charts.
- e. Fundamental Hydraulics – A continuation of energy head, the conservation laws and the calculation of flows and velocities within series and parallel pipe systems utilizing Bernoulli's equation, the Moody Diagram, the Reynolds Number and an iterative process.
- f. Hydraulic Devices – Determination of flows thru an orifice, typical devices that demonstrate orifice flow, the calculation of flow over weirs, the use of weir charts, calculation of siphon flows and typical uses.
- g. Open Channel Hydraulics – Fundamental concepts, typical uses, calculation of critical depth, critical slope, Froude Number, subcritical, critical and supercritical flow, Manning's Equation, calculation of slope, wetted area, wetted perimeter and the hydraulic radius as related to rectangular, trapezoidal and circular channels.
- h. Open Channel Hydraulics – A continuation of subcritical, critical and supercritical flow and Manning's Equation. An introduction to the

relationship of flow as it relates to velocity within pipes at ambient pressure and the computation of backwater curves for channel design.

- i. Culvert Hydraulics – Fundamental concepts and use of culverts, design considerations, a review of the energy equations and energy and hydraulic gradelines, flows thru a culvert, inlet control and entrance types, outlet control and tailwater depth, use of culvert design tables.
- j. Fundamental Hydrology – The hydrologic cycle, evaporation, evapotranspiration, infiltration, groundwater movement, base flow, the use of topographic maps and the delineation of a drainage area, the hydraulic path and the Time of Concentration, overland flow, shallow concentrated flow and stream flow, calculation of travel time for shallow concentrated flows, rainfall events, return periods, the relationship between runoff and time, the unit hydrograph and flood routing.
- k. Runoff Calculations – The use of the Rational Method for Peak Runoff Calculations, the Modified Rational Method for peak runoff calculations and the use of a triangular hydrograph, calculation of a synthetic hydrograph utilizing the SCS Method. Determination of runoff as required by NJ Residential Site Improvement Standards and NJDOT.
- l. Storm Sewer Design – A look at typical storm sewer devices as found on residential, commercial and highway improvement projects. Site and road grading, inlet spacing and system layout, the sizing of pipes. Review of a simple storm sewer design.
- m. Detention Design – The need for designs that implement Best Management Practices and address water quality issues, typical on-site detention design parameters, flow attenuation, the calculation of an impoundment volume, the computation of an impoundment outflow utilizing weirs and orifices and groundwater flow calculations.
- n. Capstone Project – Discuss project criteria for the design of a simple storm sewer system and outlet structure and perform work related to the project.

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents.

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Corequisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-7

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF ENGINEERING

1. COURSE NUMBER AND TITLE: CVET 256: Land Development and Site Planning
2. SEMESTER HOURS: 3 CONTACT HOURS: (3 + 0)
Lecture Lab
3. CATALOG DESCRIPTION

~~This course will examine the process of land development. The concepts of land planning, master plan and land use regulation (zoning) will be discussed. Site planning and design topics will include environmental assessment issues of geology and soils, vegetation, hydrology, and climate. Site development issues of earthwork and grading, drainage and erosion, streets and road, utilities, parking and building construction will be covered.~~

This course focuses on the following topics: the history and the concepts of land planning, land use regulation (zoning), and master plan development; planning resources; environmental impacts on land use; Geographical Information Systems; hydrological systems; design of sewerage and water supply systems; site planning and design topics including environmental assessment issues of geology and soils, vegetation, hydrology, and climate; site development issues of earthwork and grading, drainage and erosion, streets and roads, utilities, parking and building construction.

4. PREREQUISITES: None COREQUISITES: None CVET 182
5. MAXIMUM CLASS SIZE: 24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

COURSE TYPE FOR PERKINS REPORTING: vocational non-vocational

6. JUSTIFICATION

a. Describe the need for this course.

An understanding of land use planning, including its history and current practice, is important in the function of Government bodies as they implement land development techniques for green acres, blue acres, open space preservation, and other purposes. A basic knowledge of these topics is essential in the practice of civil engineering. Although this course is primarily related to the civil engineering field, its background is also useful in other professional fields.

b. Relationship to courses within the College

- i. Does this course satisfy a general education requirement for the Liberal Arts degree? yes no

If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Humanities (If applicable: Group A Group B)
 Mathematics

- ii. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree? yes no

If yes, please explain:

[The diversity requirement is defined as "any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought."]

- iii. Does this course satisfy a general education requirement for other Associate degrees? yes no

If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Humanities Mathematics

- iv. If the course does not satisfy a general education requirement, which of the following does it satisfy:

Program-specific requirement for the following degree program:

 Elective

- v. Does this course satisfy the computer literacy requirement? yes no

c. **Related courses in other institutions**

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course's transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

- i. List any comparable course(s) at other community colleges by completing the table below. Insert "None" if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)	Course Title	Course Number	Number of Credits	Comments

- ii. If "None" was inserted, please explain.
- iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

<i>Transferability of Proposed Course</i>				
<i>Institution</i>	<i>Course Code, Title, and Credits</i>	<i>Transfer Category (Major, General Ed., or Elective)</i>	<i>Will NOT Transfer (Place an "x" in box)</i>	<i>Unable to Determine Status (Place "U" in box)</i>
<i>Georgian Court University</i>				
<i>Kean University</i>				
<i>Monmouth University</i>				
<i>Richard Stockton College</i>				
<i>Rowan University</i>				
<i>Rutgers – New Brunswick</i>				

- iv. If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).
 - v. If not transferable to any institution, explain.
- d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College
- ◆ This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.
 - ◆ This course is consistent with the following goals of the college as expressed in the Academic Master Plan:
 - Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students
 - Establish a shared commitment to high and meaningful educational and ethical standards.
 - Prepare students for successful transfer to other educational institutions.
 - Prepare students for a rewarding life marked by personal growth and life long learning.
- e. Mark with an "x" the General Education goal(s) addressed by this course:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |

- | | | |
|-------------------------------------|---|--|
| <u>x</u> 3. <i>Problem Solving</i> | <u>_</u> 7. <i>Historical Consciousness</i> | <u>_</u> 11. <i>Civic Responsibility</i> |
| <u>_</u> 4. <i>Ethical Judgment</i> | <u>_</u> 8. <i>Diversity</i> | <u>x</u> 12. <i>Technology</i> |
| | | <u>_</u> 13. <i>Lifelong Learning</i> |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. Attain an overview of Land Use Planning.
- b. ~~Understand~~ **Discuss** the importance of environmental impacts on the use of land.
- c. ~~Understand~~ **Use** the principals of personal planning.
- d. ~~Gain an overview of~~ **Discuss and use** Geographical Information Systems
- e. ~~Understand~~ **Describe** the role of Civil Engineering and its necessity in site development

8. METHODS OF INSTRUCTION

One hour of formal lecture and class discussion and three hours of computer laboratory per week. Concepts will be explained and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate textbook will be selected. Please contact the department for current adoptions.

Instructional Materials:

1. ~~Practical Manual of Land Development, 3rd Edition, Barbara Colley, P.E., McGraw-Hill~~
2. ~~What Color Is Your parachute?, Richard Bolles, ten Speed Press~~

Technology:

Human Resources Needs:

~~Presently Employed Faculty can teach this course.~~

10. TENTATIVE TOPICAL OUTLINE

- o History of Land Use Planning
- o Planning Resources: Maps, Plans, Internet
- o Comprehensive Plan, Zoning, and land Use Regulations
- o Master Plan Review, Environmental Impact Discussion
- o Environmental Impacts and Society; Site Analysis
- o Hydrological Systems, Professional Career Options

- Sanitary Sewers
- Career Planning
- Geographical Information Systems
- Water Supply
- Earthwork, Soils, and Subsurface Conditions
- Introduction to Transportation, Roadways, and Parking Lots
- Introduction to Site Planning
- Final Plans and Specifications
- The Construction Phase

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Corequisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-8

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF SCIENCE AND ENGINEERING

1. COURSE NUMBER AND TITLE: ENGR-180: Computer-Aided Graphics: Basic Auto CAD
2. SEMESTER HOURS: 2 CONTACT HOURS: (1 + 3)
Lecture Lab
3. CATALOG DESCRIPTION

A basic course in the fundamentals of computer-aided drafting/design (CADD). The course provides the student with an understanding of the concepts, features and limitations of a micro-computer based CAD system. Students will gain hands-on experience using the latest release of "AutoCAD" 2D software, the computer, digitizer and plotter. The majority of the course time consists of laboratory exercises.

4. PREREQUISITES: None CO-REQUISITES: None
5. MAXIMUM CLASS SIZE: ~~16~~ **24** COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: *vocational* *non-vocational*

6. **JUSTIFICATION**

a. *Describe the need for this course*

Computer-aided drafting skills are an integral part of most technical fields and some non-technical fields. This course presents a concise overview of the benefits and limitations of a CAD system for students in any major. Applications to various disciplines will be utilized in the course.

b. *Relationship to courses within the College*

- i. *Does this course satisfy a general education requirement?* *yes* *no*
If yes, mark with an "x" the appropriate category below.

Communication *Social Science* *Lab Science*
 Mathematics *Humanities*

- ii. *Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees?* *yes* *no*

If yes, mark with an "x" the appropriate category. *Group A* *Group B*

- iii. *If the course does not satisfy a general education requirement, which of the following does it satisfy:*

Program-specific requirement for the following degree program:

x Elective

iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?

 yes x no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

v. Does this course satisfy the computer literacy requirement? yes x no

c. *Related courses in other institutions*

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

i. *List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.*

<i>Comparable Courses at NJ Community Colleges</i>				
<i>Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)</i>	<i>Course Title</i>	<i>Course Number</i>	<i>Number of Credits</i>	<i>Comments</i>

ii. *If “None” was inserted, please explain.*

iii. *Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.*

<i>Transferability of Proposed Course</i>				
<i>Institution</i>	<i>Course Code, Title, and Credits</i>	<i>Transfer Category (Major, General Ed., or Elective)</i>	<i>Will NOT Transfer (Place an “x” in box)</i>	<i>Unable to Determine Status (Place “U” in box)</i>

<i>Rutgers – New Brunswick</i>				
<i>Georgian Court University</i>				
<i>Richard Stockton College</i>				
<i>Monmouth University</i>				
<i>Kean University</i>				
<i>Rowan University</i>				

- iv. *If a “U” was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).*
- v. *If not transferable to any institution, explain.*

d. *Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College*

- ◆ *This course will help the college to fulfill its mission of fostering excellence by offering comprehensive programs that develop intentional learners of all ages.*
- ◆ *This course is consistent with the following goals of the college as expressed in the Academic Master Plan:*
 - *Provide a challenging, coherent, and integrated curriculum, including high quality instructional and cultural programs for a diverse population of students*
 - *Establish a shared commitment to high and meaningful educational and ethical standards.*
 - *Prepare students for successful transfer to other educational institutions.*
 - *Prepare students for a rewarding life marked by personal growth and lifelong learning.*

e. *Mark with an “x” the General Education goal(s) addressed by this course:*

- | | | |
|---|---|---|
| <input type="checkbox"/> 1. <i>Independent Thinking</i> | <input type="checkbox"/> 5. <i>Science & Social Science</i> | <input type="checkbox"/> 9. <i>Global Perspective</i> |
| <input type="checkbox"/> 2. <i>Communication</i> | <input type="checkbox"/> 6. <i>Aesthetic Appreciation</i> | <input type="checkbox"/> 10. <i>Health & Well Being</i> |
| <input checked="" type="checkbox"/> 3. <i>Problem Solving</i> | <input type="checkbox"/> 7. <i>Historical Consciousness</i> | <input type="checkbox"/> 11. <i>Civic Responsibility</i> |
| <input type="checkbox"/> 4. <i>Ethical Judgment</i> | <input type="checkbox"/> 8. <i>Diversity</i> | <input checked="" type="checkbox"/> 12. <i>Technology</i> |
| | | <input type="checkbox"/> 13. <i>Lifelong Learning</i> |

7. **SPECIFIC COURSE LEARNING OBJECTIVES**

Students who successfully complete this course will be able to:

- a. Develop a working knowledge of AutoCAD two-dimensional drafting software.
- b. Use the AutoCAD interface to input drawing information in a computer.
- c. Set up drawings, use drawings aids, save drawings, and get help when needed.
- d. Draw lines, basic shapes, geometric constructions, and edit drawings.
- e. Make multiview layouts and print or plot the drawing.
- f. Place text on drawings.
- g. Make block drawings
- h. Insert blocks and external references into drawings.
- i. Create Isometric drawings.

8. METHODS OF INSTRUCTION

One hour of formal lecture and class discussion and three hours of computer laboratory per week. Concepts will be explained and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS/TECHNOLOGY NEEDS/HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate text will be selected. Contact the department for current adoptions. Presently employed faculty can teach this course.

10. TENTATIVE TOPICAL OUTLINE

- ◆ AutoCAD Program
- ◆ Block Diagrams & Plotting
- ◆ Geometric Constructions
- ◆ Orthographic Views
- ◆ Orthographic Views
- ◆ Formats, Blocks
- ◆ Attributes & Extraction
- ◆ Design Center
- ◆ External References
- ◆ Raster Images
- ◆ Dimensioning & Tolerances
- ◆ Section Drawing & Hatching
- ◆ Isometric Drawing

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalents

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

EXHIBIT B-9

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF SCIENCE AND ENGINEERING

1. COURSE NUMBER AND TITLE: ENGR-196: Geographic Information Systems

2. SEMESTER HOURS: 3 CONTACT HOURS: (1 + 4)
Lecture Lab

3. CATALOG DESCRIPTION

Geographic Information Systems (GIS) deal with the development and utilization of maps and data. GIS integrates the display capabilities of a computerized map with the information management tools of a spreadsheet. This course will include an overview of maps and computer systems, a look at models for attribute and spatial data, the organization of data in a GIS, and how a GIS can be utilized.

4. PREREQUISITES: ~~ENGR 192~~ or CVET 182 COREQUISITES: None

5. MAXIMUM CLASS SIZE: ~~16~~ 24 COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: **B**

Course Type for Perkins Reporting: vocational non-vocational

6. JUSTIFICATION

a. Describe the need for this course

Computer aided drafting skills are an integral part of most technical fields and some non-technical fields. Architecture, engineering, environmental studies, surveying, mapping, and advertising all use CAD graphics skills and require the production of graphic representations. CAD has become an essential drafting tool.

b. Relationship to courses within the College

i. Does this course satisfy a general education requirement? yes no
If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Mathematics Humanities

ii. Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees? yes no

If yes, mark with an "x" the appropriate category. Group A Group B

iii. If the course does not satisfy a general education requirement, which of the following does it satisfy:

Program-specific requirement for the following degree program:

x Elective

iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?

 yes x no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain: _____

v. Does this course satisfy the computer literacy requirement? yes x no

c. Related courses in other institutions

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)	Course Title	Course Number	Number of Credits	Comments

ii. If “None” was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
Institution	Course Code, Title, and Credits	Transfer Category (Major, General Ed., or Elective)	Will NOT Transfer (Place an “x” in box)	Unable to Determine Status (Place “U” in box)

Rutgers – New Brunswick				
Georgian Court University				
Richard Stockton College				
Monmouth University				
Kean University				
Rowan University				

- iv. If a “U” was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).
 - v. If not transferable to any institution, explain.
- d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College:

This course addresses the College’s vision, mission, and Academic Master Plan by

- i. Demonstrating the college’s commitment to offer comprehensive educational programs that develop intentional learners of all ages. (Mission Statement)
 - ii. Seeking to ensure that students will thrive in an increasingly diverse and complex world. (Vision Statement)
 - iii. Preparing students for successful transfer to other educational institutions and/or for entrance into the workforce. (Academic Master Plan)
 - iv. Seeking to empower students through the mastery of intellectual and practical skills. (Academic Master Plan)
 - v. Challenging students to transfer information into knowledge and knowledge into action. (Academic Master Plan)
- e. Mark with an “x” the General Education goal(s) addressed by this course:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. Complete applications using Overlay Analysis.
- b. Complete applications using Topographical Queries.
- c. Complete applications using Edge Matching.
- d. Attach External Databases.

8. METHODS OF INSTRUCTION

One hour of lecture four hours of computer laboratory per week. Concepts will be explained and students will follow with hands on laboratory sessions

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate text will be selected. Contact the department for current adoptions.

10. TENTATIVE TOPICAL OUTLINE

- ◆ What is GIS.
- ◆ Thematic Mapping
- ◆ Topology
- ◆ Raster Images
- ◆ GIS Techniques
- ◆ Digital maps
- ◆ External Databases
- ◆ Applications in Civil Engineering
- ◆ Applications in Environmental Areas
- ◆ Multiple Drawings and Data Sets
- ◆ Site Selection
- ◆ Facilities Management
- ◆ Business Routing
- ◆ Architectural Restoration

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalent.

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

Board of Trustees Approval Date: September 22, 2008

EXHIBIT B-10

OCEAN COUNTY COLLEGE
OFFICIAL COURSE DESCRIPTION
DEPARTMENT OF SCIENCE AND ENGINEERING

1. COURSE NUMBER AND TITLE: ENGR-198: Autodesk Inventor
2. SEMESTER HOURS: 3 CONTACT HOURS: (1 + 4)
Lecture Lab
3. CATALOG DESCRIPTION

This course will introduce the aspects of Solid Modeling and Parametric Modeling, using AutoDesk Inventor. The student starts with constructing basic shapes to building intelligent solid models, creating multi-view drawings and assembly models.

4. PREREQUISITES: ~~ENGR-192 or CVET-182~~ *None*
COREQUISITES: None
5. MAXIMUM CLASS SIZE: ~~16-24~~ COURSE FEE CODE: 2
DIFFERENTIAL FUNDING CATEGORY: B

Course Type for Perkins Reporting: vocational non-vocational

6. JUSTIFICATION

- a. Describe the need for this course

Computer-aided drafting skills are an integral part of most technical fields and some non-technical fields. Architecture, engineering, environmental studies, surveying, mapping, and advertising all use CAD graphics skills and require the production of graphic representations. CAD has become an essential drafting tool.

- b. Relationship to courses within the College

- i. Does this course satisfy a general education requirement? yes no
If yes, mark with an "x" the appropriate category below.

Communication Social Science Lab Science
 Mathematics Humanities

- ii. Does this course satisfy a Group A or Group B Humanities/Literature requirement for the AA in Liberal Arts degrees? yes no

If yes, mark with an "x" the appropriate category. Group A Group B

- iii. If the course does not satisfy a general education requirement, which of the following does it satisfy:

Program-specific requirement for the following degree program:

x Elective

iv. Does this course satisfy the diversity requirement for the AA in Liberal Arts degree?

___ yes x no

[The diversity requirement is defined as “any course whose primary purpose is to help students analyze the implications of the commonalities and differences among culturally diverse people(s). This requirement may include courses in gender studies or in non-western history and thought.”]

If yes, please explain:

v. Does this course satisfy the computer literacy requirement? ___ yes x no

c. Related courses in other institutions

[NOTE: The two charts below need to be completed when submitting a new course proposal. They do not need to be completed for most course revisions, unless an Official Course Description is so old that the course’s transferability needs to be reconsidered, as in the case of an obsolete course which may be reactivated.]

i. List any comparable course(s) at other community colleges by completing the table below. Insert “None” if there are no comparable courses.

Comparable Courses at NJ Community Colleges				
Institution (ex., Brookdale CC, Mercer CC, Atlantic Cape CC, etc.)	Course Title	Course Number	Number of Credits	Comments

ii. If “None” was inserted, please explain.

iii. Complete the table below. The four-year institutions listed below comprise the top six institutions queried on NJTransfer by OCC students.

Transferability of Proposed Course				
Institution	Course Code, Title, and Credits	Transfer Category (Major, General Ed.,	Will NOT Transfer (Place an “x”	Unable to Determine Status

		or Elective)	in box)	(Place "U" in box)
Rutgers – New Brunswick				
Georgian Court University				
Richard Stockton College				
Monmouth University				
Kean University				
Rowan University				

- iv. If a "U" was inserted above, document the course transferability by providing either (a) the name of a contact person at the four-year institution, or (b) an email from the contact person (attach to this proposal).
- v. If not transferable to any institution, explain.

d. Consistency with the vision and mission statements, the Academic Master Plan, and the strategic initiatives of the College:

This course addresses the College's vision, mission, and Academic Master Plan by

- i. Demonstrating the college's commitment to offer comprehensive educational programs that develop intentional learners of all ages. (Mission Statement)
- ii. Seeking to ensure that students will thrive in an increasingly diverse and complex world. (Vision Statement)
- iii. Preparing students for successful transfer to other educational institutions and/or for entrance into the workforce. (Academic Master Plan)
- iv. Seeking to empower students through the mastery of intellectual and practical skills. (Academic Master Plan)
- v. Challenging students to transfer information into knowledge and knowledge into action. (Academic Master Plan)

e. Mark with an "x" the General Education goal(s) addressed by this course:

- | | | |
|--|--|--|
| <input type="checkbox"/> 1. Independent Thinking | <input type="checkbox"/> 5. Science & Social Science | <input type="checkbox"/> 9. Global Perspective |
| <input type="checkbox"/> 2. Communication | <input type="checkbox"/> 6. Aesthetic Appreciation | <input type="checkbox"/> 10. Health & Well Being |
| <input checked="" type="checkbox"/> 3. Problem Solving | <input type="checkbox"/> 7. Historical Consciousness | <input type="checkbox"/> 11. Civic Responsibility |
| <input type="checkbox"/> 4. Ethical Judgment | <input type="checkbox"/> 8. Diversity | <input checked="" type="checkbox"/> 12. Technology |
| | | <input type="checkbox"/> 13. Lifelong Learning |

7. SPECIFIC COURSE LEARNING OBJECTIVES

Students who successfully complete this course will be able to:

- a. Create simple parametric models
- b. Understand the basic parametric modeling process
- c. Create rough sketches
- d. Understand the “shape before size” approach
- e. Use the view commands
- f. Create and modify dimensions

8. METHODS OF INSTRUCTION

One hour of lecture and four hours of computer laboratory per week. Concepts will be explained, and students will follow with hands-on laboratory sessions.

9. INSTRUCTIONAL MATERIALS / TECHNOLOGY NEEDS / HUMAN RESOURCE NEEDS (PRESENTLY EMPLOYED VS. NEW FACULTY)

Text: An appropriate text will be selected. Contact the department for current adoptions.

10. TENTATIVE TOPICAL OUTLINE

- ◆ Parametric Modeling Fundamentals
- ◆ The Features Toolbar
- ◆ 2D Sketch Tools, The Solids
- ◆ Toolbar Creating
- ◆ Weldments
- ◆ Sheet Metal Tools
- ◆ Creating Sheet Metal Parts
- ◆ Drawing Management
- ◆ Drawing Annotation Toolbar
- ◆ Drafting Standards, Textures and Colors
- ◆ Assembly Modeling Tools
- ◆ Bottom Up Assembly
- ◆ Top-Down Assembly
- ◆ Assembly Drawings

11. GRADE DETERMINANTS

The final grade in the course will be the cumulative grade based on the following letter grades or their numerical equivalents for the course assignments and examinations:

A	Excellent	C	Average	I	Incomplete
B+	Very Good	D	Below Average	W	Withdrawn
B	Good	F	Failure	R	Audit
C+	Above Average	P	Passing	NC	No Credit

12. NUMBER OF PAPERS AND EXAMINATIONS

A minimum of three major examinations and one major written assignment, or the equivalent.

APPROVAL PROCESS FOR A REVISED COURSE PROPOSAL (SYLLABUS)

Revision of the Following Items Must Be Sent to the Curriculum Committee	Revision of the Following Items Require No Approval
#1 Course Number & Title	#8 Methods of Instruction
#2 Semester Hours/Contact Hours	#9 Instructional Materials
#3 Catalog Description	#10 Tentative Topical Outline
#4 Prerequisites & Co- requisites	#11 Grade Determinants
#5 Maximum Class Size/Lab Fee Code/ Differential Funding Category	#12 Number of Papers and Examinations
#6 Justification	
#7 Course Objectives	

Board of Trustees Approval Date: September 22, 2008

EXHIBIT B-11

OCC General Education Goals and Objectives – February 2009

Based on the NJ Community Colleges/AOA General Education Foundation

(1997 Adopted, August 15, 2007 Revision)

New Jersey Community College General Educational Philosophy: Students are empowered to meet twenty-first century challenges through learning processes that lead to knowledge acquisition, skills mastery, critical thinking, and the exercise of personal, social, and civic responsibilities.

The Colleges maintain responsibility for offering a general education program, whose learning objectives facilitate attainment of all NJCC Gen Ed Learning Goals. Course-level learning objectives must be consistent with the **College-Wide Learning Objectives** that fulfill the **NJCC Gen Ed Learning Goals**. (Local general education courses must also be consistent with **NJCC GE Course Criteria** for satisfying requirements.)

NJCC Goal Categories	NJCC Gen. Ed. Learning Goals	College-Wide General Education Learning Objectives
1 Written and Oral Communication (Communication)	Students will communicate effectively in both speech and writing.	<ul style="list-style-type: none"> a. Students will explain and evaluate what they read, hear, and see. b. Students will state and evaluate the views and findings of others. c. Students will logically and persuasively state and support orally and in writing their points of view or findings. d. Students will evaluate, revise, and edit their communication.
2 Quantitative Knowledge and Skills (Mathematics)	Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.	<ul style="list-style-type: none"> a. Students will translate quantifiable problems into mathematical terms and solve these problems using mathematical or statistical operations. b. Students will construct graphs and charts, interpret them, and draw appropriate conclusions.
3 Scientific Knowledge and Reasoning (Science)	Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.	<ul style="list-style-type: none"> a. Applying the scientific method, students will analyze a problem and draw conclusions from data and evidence. b. Students will distinguish between scientific theory and scientific discovery, and between science and its scientific technological applications, and they will explain the impact of each on society.
4 Technological Competency or Information Literacy (Technology)	Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.	<ul style="list-style-type: none"> a. Students will use computer systems and/or other appropriate forms of technology to present information. b. Students will use appropriate forms of technology to identify, collect, and process info. c. Students will use appropriate library/learning resource tools such as cataloging systems to access information in reference publications, periodicals, bibliographies, and data bases. d. Students will recognize when information is needed and be able to locate, evaluate, and use information.
5 Society and Human Behavior (Social Science)	Students will use social science theories and concepts to analyze human behavior and social, economic, and political institutions and to act as responsible citizens.	<ul style="list-style-type: none"> a. Students will analyze and discuss behavioral or societal issues using theories and concepts from a social science perspective. b. Students will explain how social institutions and organizations influence individual behavior. c. Students will describe and demonstrate how social scientists gather and analyze data and draw conclusions. d. Students will apply civic knowledge both locally and globally and engage in activities that exercise personal, social, and civic responsibility.
6 Humanistic Perspective (Humanities)	Students will analyze works in the fields of art, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language.	<ul style="list-style-type: none"> a. Students will describe commonly used approaches and criteria for analyzing works*. b. Students will analyze works* applying commonly used approaches and criteria. c. Students will demonstrate proficiency in the production and comprehension of a foreign language. <p>* in the fields of art, music, or theater; literature; philosophy and/or religious studies and possibly within the context of studying and using a language other than English.</p>
7 Historical Perspective (History)	Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.	<ul style="list-style-type: none"> a. Students will state the causes of a major historical event and analyze the impact of that event on a nation or civilization. b. Students will discuss a major idea, movement, invention or discovery, and how it affected the world or American society. c. Students will demonstrate how writers' interpretations of historical events are influenced by their time, culture, and perspective.
8 Global and Cultural Awareness	Students will understand the importance of a global perspective and culturally diverse peoples.	<ul style="list-style-type: none"> a. Students will link cultural practices and perspectives with geographic and/or historical conditions from which they arose and evaluate the contributions of people from various nations and/or cultures. b. Students will explain why an understanding of differences in people's backgrounds is particularly important to American society. c. Students will recognize and explain the possible consequences of prejudicial attitudes and discriminatory actions. d. Students will be exposed to global linkages in economics, politics, business, health, and other shared cultural concerns.
9 Ethical Reasoning and Action	Students will understand ethical issues and situations.	<ul style="list-style-type: none"> a. Students will analyze and evaluate the strengths and weaknesses of different perspectives on an ethical issue or a situation. b. Students will take a position on an ethical issue or a situation and defend it.
10 Independent/Critical Thinking	Students will demonstrate independent/critical thinking in the humanities, natural sciences, and social sciences	<ul style="list-style-type: none"> a. Students will interpret and evaluate literary and visual art based on stylistic and contextual analysis. b. Students will arrive at solutions through hypothesis, inquiry, analysis, and interpretation in studying the natural sciences. c. Students will synthesize diverse ideas and information and draw valid inferences in studying the social sciences.

Note: This document should be used in conjunction with the **General Education Foundation (8-15-2007)** and the **NJCC GE Course Criteria (8-15-2007)**.

EXHIBIT B-12

POLICY

1. This policy is intended to ensure that college staff and students who may be affected by the research involving the use of human subjects can be certain that it is ***institutional research projects conducted by the college Office of Institutional Research (IR)*** are sound and that it ~~does~~ ***they do*** not violate board policy, college operating procedures, and federal and state regulations (Title 45, Code of Federal Regulations, Part 46) concerning protection of human participants.
2. Employees of the College or appropriate external researchers may conduct education-related research projects, ***including those*** that involve the use of human subjects. Such persons shall be called Principal Investigators (PI).
3. Such research must be ***approved and prioritized by IR and/or by the Research Council following the prescribed procedures and must be*** compatible with Ocean County College's mission and purpose. The research should deal with the teaching/learning environment or with the college's policies, procedures, or operations.