FORM A
College of Engineering Technology

Revised 05/08/2009

PROPOSAL SUMMARY AND ROUTING FORM

Proposal Title: CTDI 114 – Introduction to Parametric Solid Modeling

Initiating Unit or Individual: School of Design and Manufacturing – Larry Schult, Interim Director
Contact Person’s Name: Larry Schult  e-mail: schultl@ferris.edu  phone: ext. 3983
Date or Term of Proposal Implementation: 2012

☐ Group I - A – New degree/major or major, redirection of a current offering, or elimination of a degree, major or minor
☐ Group I - B – New minors or concentrations
☐ Group II - A – Minor curriculum clean-up and course changes
X Group II - B – New Course
☐ Group III - Certificates
☐ Group IV – Off-Campus Programs

<table>
<thead>
<tr>
<th>Group/Individual</th>
<th>Signature</th>
<th>Date</th>
<th>Vote/Action *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Faculty/Committee</td>
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<td>School Committee</td>
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<td>College Curriculum Committee</td>
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<td>11/17/11</td>
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<td>Dean</td>
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<td>11/23/11</td>
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<td>University Curriculum Committee</td>
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<td>Academic Affairs</td>
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* Support with Concerns or Not Support must include a list of specific concerns. Votes must be shown for faculty groups. Administrators check appropriate action taken.

To be completed by Academic Affairs

President (Date Approved) Board of Trustees (Date Approved) President’s Council (Date Approved)
To: School of Manufacturing and Design Curriculum Committee
From: Blaine Danley
Date: November 17, 2011
Subject: Rational for not supporting proposal to create CDTD 114

The proposal to create CDTD 114 involves understanding the following courses:

- CDTD 111 – Drafting Fundamentals (4 credit class on CDTD check sheet)
- CDTD 112 – CAD Fundamentals (4 credit class on CDTD check sheet)
- CDTD 113 – 2 credit class not yet submitted for approval
- CDTD 114 – Proposed 2 credit class
  (both of these 2 credit classes are for Traverse area high school students)

The purpose of creating CDTD 114 is to provide high school students in the Traverse City area schools the opportunity to take this class while in high school and have the class count towards graduation at Ferris. The content of the proposed 2 credit CDTD 114 has been described as covering part (½) of the material taught in CDTD112 (a 4 credit class on the check sheet for CDTD which is only offered on campus at Ferris).

CDTD 113 (which has not been submitted) will be created as a 2 credit class for this same group of students. It was stated that CDTD 113 will cover (½) the material covered in CDTD 111 (a 4 credit class that is also on the check sheet for CDTD). Additionally, it was stated that high school students who take CDTD 113 & 114 will receive credit for (or not be required to take) CDTD 111. I fail to see the logic in giving a high school student credit for CDTD 111 (or not requiring them to take CDTD 111) if they successfully complete CDTD 113 and 114, when CDTD113 is (½) of CDTD 111 and CDTD 114 is (½) of CDTD 112.

I suggest one of the following changes.

1. Make CDTD 114 a 4 credit class that covers all the material covered in CDTD 112. I believe the hours are available at the high school to do this. Also when CDTD 113 is submitted make it a 4 credit course equivalent to CDTD 111.

2. Remove CDTD 111 and 112 from the CDTD check sheet and replace them with CDTD 113 and 114.
1. Proposal Summary

This course is specifically being created to align with a unique agreement between Ferris State University and the Traverse Bay Area Intermediate School District. The agreement was made to award college credit in technology to their academically advanced students. This will aid in their STEM development toward entering into engineering and engineering technology collegiate programs and careers. This course was developed and offered as a “290” course which was delivered last academic year to a chosen cohort of students at the Manufacturing Technology Academy which is part of the TBAISD. The students received Ferris credit for taking the 290 course and will do the same for this course. The course will be taught utilizing on-line delivery.

2. Summary of All Course Action Required*

   a. Newly Created Courses to FSU:

      Prefix  Number  Title
      CDTD    114     Introduction to Parametric Solid Modeling

   b. Courses to be Deleted From FSU Catalog:

      Prefix  Number  Title

   c. Existing Course(s) to be Modified:

      Prefix  Number  Title

   d. Addition of existing FSU courses to program

      Prefix  Number  Title

   e. Removal of existing FSU courses from program

      Prefix  Number  Title
3. Summary of All Consultations

<table>
<thead>
<tr>
<th>Form Sent (B or C)</th>
<th>Date Sent</th>
<th>Responding Dept.</th>
<th>Date Received &amp; by Whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form B</td>
<td>11/14/11</td>
<td>On Line Operations-Don Green</td>
<td>11/14/11</td>
</tr>
<tr>
<td>Form C</td>
<td>11/14/11</td>
<td>FLITE-Fran Rosen</td>
<td></td>
</tr>
</tbody>
</table>

4. Will External Accreditation be Sought? (For new programs or certificates only)

_________ Yes ___________ No

If yes, name the organization involved with accreditation for this program.

5. Program Checksheets affected by this proposal.

NONE
CURRICULUM CONSULTATION FORM

To be completed by each department affected by the proposed change, new degree, new program, new minor, or new course. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the chair/head of the department to be consulted.

2. The department must respond within 20 calendar days of receipt of this form to insure inclusion in the final proposal. The completed form is returned to the initiator and inserted into the proposal.

   Failure to respond is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the department. This response will be in writing and be included in the proposal following the consultation form.

RE: Proposal Title  CDTD 114—Introduction to Parametric Solid Modeling

Initiator(s): Larry Schult
Proposal Contact: Don Green Date Sent: 11/14/11
Department: _____ Campus Address: _____
(Please print)

Responding Department: _____  for Don Green
Chair/Head/Coordinator: _____ Date Returned: 11-14-2011

Based upon department faculty review on 11-14-2011, we

☒ Support the above proposal.
☐ Support the above proposal with the modifications and concerns listed below.
☐ Do not support the proposal for the reasons listed below.

Comment regarding the impact this proposal has on scheduling, room assignments, faculty load, and prerequisites for your department. Use additional pages, if necessary.
FLITE SERVICES CONSULTATION FORM

To be completed by the liaison librarian and approved by the Dean of FLITE. All returned forms should be included in the proposal. FLITE must respond within 20 calendar days of receipt of this form to insure that the form is included in the final proposal.

FAILURE TO RESPOND IS CONSIDERED AS SUPPORT OF THE CHANGE.

RE: Proposal Title: CDTD 114–Introduction to Parametric Solid Modeling

Projected number of students per year affected by proposed change: _____

Initiator(s): Larry Schult
Proposal Contact: Fran Rosen Date Sent: 11/14/11
Department: _____ Campus Address: _____
(Please print)

Liaison Librarian Signature: ___ Date: 11/14/11
Dean of FLITE Signature: ___ Date Returned: 11-14-11

Based upon our review on 11/14/11 (date), FLITE concludes that:

☒ Library resources to support the proposed curriculum change are currently available.

☐ Additional Library resources are needed but can be obtained from current funds.

☐ Support, but significant additional Library funds/resources are required in the amount of $__________.

☐ Does not support the proposal for reasons listed below.

Comment regarding the impact this proposal will have on library resources, collection development, programs, etc. Use additional pages if necessary.
NEW COURSE INFORMATION FORM
See Sample – Limit to Two Pages Please

Course Identification:
Prefix: CDTD  Number: 114  Title: Introduction to Parametric Solid Modeling

Course Description:
This introductory lecture/lab course uses an applied approach to understanding the concepts and operation of parametric solid modeling applications used in the mechanical design fields. The course uses a computer graphics system for creation of two- and three-dimensional geometry. The student will learn file creation and management and graphics generation. Students will learn how to edit and manipulate geometry. The majority of this course focuses on 3-D model creation and the creation of assembled components. Course also includes demonstrations of prototype development and reverse engineering technologies.

Course Outcomes:
- Apply concepts and processes to generate engineering models that are used to describe mechanical components
- Demonstrate the efficient use of a parametric solid modeling technology
- Create and manage files and documents used for engineering documentation
- Generate functional assembly models
- Describe functions of scanning and prototyping technologies

Assessment Plan:
1. Demonstration/observation
2. Performance assessments
3. Written assessments
**Course Outline including Time Allocation:**

<table>
<thead>
<tr>
<th>NO.</th>
<th>UNIT TOPIC DESCRIPTION SUMMARY</th>
<th>LECTURE HOURS</th>
<th>LAB HOURS</th>
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<tbody>
<tr>
<td>1</td>
<td>Computer and software systems, file management, Modeling Interfaces</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Parametric modeling design cycle</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Two dimensional sketching functions</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Three dimensional modeling functions</td>
<td>3</td>
<td>9</td>
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<tr>
<td>5</td>
<td>Features and Feature based modeling</td>
<td>1</td>
<td>3</td>
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<tr>
<td>6</td>
<td>Assembly Modeling</td>
<td>1</td>
<td>3</td>
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<tr>
<td>7</td>
<td>Standard components</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Generating Engineering Graphics</td>
<td>1</td>
<td>3</td>
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<tr>
<td>9</td>
<td>Modeling for manufacturing processes</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>Generating graphical outputs</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Intro to prototyping and reverse engineering</td>
<td>1</td>
<td>3</td>
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<td></td>
<td>Final Exam</td>
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<tr>
<td></td>
<td>Total Hours</td>
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CREATE NEW COURSE
Course Data Entry Form

I. ACTION TO BE TAKEN: CREATE A NEW COURSE
   Notes
   1. Complete each item in Section I and Section II.
   2. If this course is to be used as a prerequisite for other university courses, Form Fs that reflect the
      prerequisite change must be submitted for those courses as well.

   Term Effective (6 digit code only): 202001
   Examples: 200801(Spring), 200805(Summer), 200808(Fall)
   Note: The first four digits indicate year, the next two digits indicate month in which term begins.

II. PROPOSED FOR NEW COURSE: Complete all sections a through r. See manual for clarification.

   a. Course Prefix: CDTD
   b. Number: 114
   c. Enter Contact Hours per week in boxes.
      LECTure 1 LAB 3 INDependent Study – Check (x) □
      Practicum: □
      Seminar: □

   d. Course Title: Introduction to Parametric Solid Modeling
      (Limit to 30 characters/spaces.)

   e. College Code: TE
   f. Department Code: MD SN
   Credit Hours: Check (x) type and enter maximum and minimum hours in boxes.

   g. Type: □ Variable □ Fixed
   h. Minimum Credit Hours 2
   i. Maximum Credit Hours 2

   j. May Be Repeated for Added Credit: Check (x) □ Yes □ No

   k. Levels: Check (x) X Undergraduate □ Graduate □ Professional

   l. Grade Method: Check (x) X Normal Grading □ Credit/No Credit only (Pass/Fail)

   m. Does proposed new course replace an equivalent course? Check (x) □ Yes □ No

   n. Equivalent course: Prefix □ Number □ See instructions on Replacement courses.

   o. CATALOG DESCRIPTION – Limit to 75 words – PLEASE BE CONCISE.
      This course is an applied approach to understanding the concepts and operation of parametric solid
      modeling applications used in the mechanical design field. It uses a computer graphics system for
      creation of two and three dimensional geometry. The student will learn file creation, file management,
      and graphics generation. The student will also learn how to edit and manipulate geometry using the
      graphics system. The major focus is 3-D model creation along with its assembled components.

   p. Term(s) Offered: F, SP
      (See instructions for listing.)

   q. Max. Section Enrollment: 60

   r. Prerequisites/Co-requisites/Restrictions: (If none, leave blank.) Limited to 100 spaces.
      Must be part of the TBAISD cohort and have CST program approval.

   UCC Chair Signature/Date: ___________________________ __________
   Academic Affairs Approval Signature/Date: ____________________________ ____________

To be completed by Academic Affairs Office: - Standard & Measures Coding and General Education Code
□ Basic Skill (BS) □ General Education (GE) □ Occupational Education (OC) □ G.E. Codes

Office of the Registrar use ONLY

Date Rec'd: ___ Date Completed: ___ Entered: SCACRSE __ SCADTL __ SCARRES __ SCAPREQ __