1. Proposing College / School:  
   **CADC**

   **Department:** Industrial and Graphic Design

2. Course Prefix and Number:  **INDD 4120**  
   **3. Effective Term:** Fall 2012

4. Course Title:  
   Advanced Computer Aided Design II

   **Abbreviated Title (30 characters or less):** ADV Computer Design 2

5. Requested Action:
   - [ ] Renumber a Course
   - [ ] Add a Course
   - [ ] Revise a Course

6. Course Credit:

<table>
<thead>
<tr>
<th>Contact/Group Hours</th>
<th>Scheduled Type (e.g.: Lab, Lecture, Practicum, Directed Study)</th>
<th>Weekly or Per Term?</th>
<th>Credit Hours</th>
<th>Anticipated Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Hours (Repeatability):</td>
<td>3</td>
<td>Lecture</td>
<td>weekly</td>
<td>3</td>
</tr>
</tbody>
</table>

   **Total Credit Hours:**

7. Grading Type:
   - [ ] Regular (ABCDF)
   - [ ] Satisfactory/Unsatisfactory (S/U)
   - [ ] Audit

8. Prerequisites/Corequisites:

   "P:" to indicate a prerequisite, "C:" to indicate a corequisite, and "P/C:" to indicate a prerequisite with concurrency.

   **P: INDD 3230**

9. Restrictions:

   List specific restriction in space above.

   - [ ] College
   - [ ] Major
   - [ ] Standing
   - [ ] Degree

10. Course Description:

   **(20 Words or Less; exactly as it should appear in the Bulletin)**

   This course builds on concepts learned in INDD 3230, with emphasis on form creation, modeling and troubleshooting and the use of digital techniques to produce three dimensional models.

11. May Count Either:  

    (Indicate if this particular course cannot be counted for credit in addition to another)

    - Program Type
      (e.g.: minor, major, etc.)
    - Program Title
      (e.g.: MS in Chemistry, Performance Option, Minor in Art)
    - Requirement or Elective?
      (required or optional?)

12. Affected Program(s):

    (Respond "N/A" if not included in any program; attach memorandum if more space is required)

    | INDD | BIND | Elective |
    |------|------|----------|

13. Overlapping or Duplication of Other Units' Offerings:

    (If course is included in any other degree program, is used as an elective frequently by other unit(s), or is in an area similar to that covered by another college/school, attach correspondence with relevant unit)

    - [ ] Applicable
    - [ ] Not Applicable
14. Justification:

This course has been piloted under the INDD 5960 designation and been well received with steady undergraduate interest.

(Include a concise, yet adequate rationale for the addition/revision of the course, citing accreditation, assessments (faculty, graduate, and/or external) where applicable)

15. Resources:

No additional resources are required

(Indicate whether existing resources such as library materials, classroom/laboratory space, and faculty appointments are adequate to support the proposed addition/revision; if additional resources are required, indicate how such needs will be met, referencing the appropriate level of authorization -- i.e. Dean -- where necessary; if no additional resources or shifting of resources will be necessary, respond “Not Applicable”)

16. Student Learning Outcomes:

Upon successful completion of this course
Students will be able to produce digital and physical prototypes using three-dimensional modeling software.
Students will be able to effectively address issues of form, material and lighting.
Students will demonstrate an understanding of how digital and physical models can be used effectively to support the design process and in the development of mechanical and aesthetic solutions.

(State in measurable terms (reflective of course level) what students should be able to do when they have completed this course)

17. Course Content Outline:

<table>
<thead>
<tr>
<th>Week</th>
<th>Assignment</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Review Policies and introduction to 3D modeling&lt;br&gt;Assignment 1: Basic coordinate entry. Exercises and original model Due next week</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Basic three dimensional shapes and precision controls&lt;br&gt;Assignment 2: Circles, arcs and extrusion. Complete assigned exercises and original product design. Due next class meeting</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Geometry and editing in 3-D&lt;br&gt;Assignment 3: Complete exercises and original design. Due Next class period</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Complete exercises, Complete original design, Design a poster format for the class work. Due next class meeting</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Editing in 3D, using layers and properties and basic rendering&lt;br&gt;Assignment 4: Complete exercises (due next class period). Create original design due two class periods from today.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Moving between surfaces and solids, assigning materials and working with light sources 1&lt;br&gt;Assignment 5: Complete exercises, due next class period. Complete original design and turn in files an poster. Due in two class periods.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Creating complex surfaces Lecture 1&lt;br&gt;Assignment 6: Complete exercises for next class period. Complete original design and output in poster form. Due in two class meetings.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Creating complex surfaces Lecture 2&lt;br&gt;Assignment 7: Complete exercises. Due next class period. Complete original design. Due in three class periods.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Troubleshooting complex surfaces and environments&lt;br&gt;In class work time and one on one troubleshooting&lt;br&gt;Assignment 8: Construct a 3D model using graphic underlays as a starting point. Due in four class periods.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Working in class and one on one troubleshooting&lt;br&gt;Week 11: Lecture: The importance of dimension; Lecture: Going from computer model to physical model&lt;br&gt;Assignment 9: Complete exercises. Due next class period. Create an original design, and produce a three-dimensional model. Due in three class meetings.</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Lecture: product cues and advanced rendering&lt;br&gt;Assignment 10: Complete exercises. Due next class period. Complete original design. Due in two class periods. Identify a product or environment for design or redesign</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Keys to successful projects</td>
<td></td>
</tr>
</tbody>
</table>
18. Assignments / Projects:
Weekly assignments: 50 percent of the final course grade
Documentation (posters and electronic files): 20 percent of the final grade
The final project: 30 percent of the final course grade.

(List all quizzes, projects, reports, activities and other components of the course grade -- including a brief description of each assignment that clarifies its contribution to the course's learning objectives)

19. Rubric and Grading Scale:
All assignments are graded on a 100-point scale. The total score for weekly assignments is determined by the average grade across all of the completed assignments. The documentation is graded on a 100-point scale based on completion. The final project is graded on a 100-point scale based on sophistication and complexity of the modeling task, aesthetics and completeness of details.

Grading scale:
A = 100 - 90
B = 89.9 - 80
C = 79.9 - 70
D = 69.9 - 60
F = below 60

(List all components of the course grade -- including attendance and/or participation if relevant -- with point totals for each; indicate point totals and ranges or percentages for grading scale; for S/U grading, detail performance expectations for a passing grade)

20. Justification for Graduate Credit:

(Include a brief statement explaining how the course meets graduate educational standards (i.e.: rigorous standards for evaluation, development of critical thinking and analytical skills, etc.))

(Included below are standard statements regarding course policies. If necessary, a statement may be altered to reflect the academic policies of individual faculty members and/or the academic unit or department, provided that there is no conflict with the Student Policy eHandbook, Faculty Handbook, or any existing university policy.)

POLICY STATEMENTS

Attendance: Although attendance is not required, students are expected to attend all classes, and will be held responsible for any content covered in the event of an absence.

Excused Absences: Students are granted excused absences from class for the following reasons: illness of the student or serious illness of a member of the student's immediate family, the death of a member of the student's immediate family, trips for student organizations sponsored by an academic unit, trips for university classes, trips for participation in intercollegiate athletic events, subpoenas for a court appearance, and religious holidays. Students who wish to have an excused absence from class for any other reason must contact the instructor in advance of the absence to request permission. The instructor will weigh the merits of the request, and render a decision. When feasible, the student must notify the instructor prior to the occurrence of any excused absences, but in no case shall such notification occur more than one week after the absence. Appropriate documentation for all excused absences is required. Please consult the Student Policy eHandbook for more information on excused absences.

Make-Up Policy: Arrangement to make up a missed major examination (e.g., hour exams, mid-term exams) due to properly authorized excused absences must be initiated by the student within one week of the end of the period of the excused absence(s). Except in unusual circumstances, such as the continued absence of the student or the advent of university holidays, a make-up exam will take place within two weeks of the date that the student initiates arrangements for it. Except in extraordinary circumstances, no make-up exams will be arranged during the last three days before the final exam period begins.

Academic Honesty Policy: All portions of the Auburn University student academic honesty code (Title XII) found in the Student Policy eHandbook will apply to university courses. All academic honesty violations or alleged violations of the SGA Code of Laws will be reported to the Office of the Provost, which will then refer the case to the Academic Honesty Committee.

Disability Accommodations: Students who need accommodations are asked to electronically submit their approved accommodations through AU Access and to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by e-mail. If you have not established accommodations through the Office of Accessibility, but need accommodations, make an appointment with the Office of Accessibility, 1228 Haley Center, 844-2086 (VITT).
INDD 4120 Advanced Computer Aided Design II

Objectives:
By the end of this course each student will be able to:
• use Three-dimensional cad software to model, render & output 3-D artifacts.
• use Three-dimensional modeling software effectively in the design process.
• create numerically accurate drawings.
• accurately position components and sub-components within three-dimensional models.
• convert geometry from solid to surface & from surface to solid.

Assignments:
Assignments will be of three types:
1. Weekly skills assignments and original products
2. Posters
3. Final project.

Grading:
Students are encouraged to discuss their course standing with the professor at anytime during the quarter. The final course grade will be derived as follows:
The weekly assignments will be averaged together and will make up 50% of the final course grade. 20% of the final grade will be based upon project posters and completeness of documenting the semester’s work. The final project will comprise the remaining 30% of the course grade. Because of the applied nature of this course, there will not be a final exam.

Final Project:
The final project for this course will involve the design and documentation of a product of your choice, subject to instructor’s approval. The Rhino model must be shown in assembled and exploded views and in context of use. More information will be provided on the final project assignment sheet.

Course Grade:
The final course grade will be based upon the following scale:
A  90 to 100
B  80 to 89
C  70 to 79
D  60 to 69
F  Below 60

Professor Bret Smith
Class time:  T, TH 9:30 - 10:45
Office: 250 Wallace Hall
Office Phone: 844-2372
Email Address: smithbh@auburn.edu
Office Hours: 8-9:15  T, TH
TA:
Students requiring special accommodation:

If you already have official accommodations from Auburn University, you are asked to arrange a meeting during office hours (or to schedule a time with the instructor if your schedule does not permit you to meet during office hours), during the first week of class to discuss your specific accommodations. Bring a copy of your Accommodations Memo to the meeting. If you do not currently have accommodations, but need them, make an appointment with the Office of Accessibility (1244 Haley Center, 844-2096) to complete the necessary paperwork.

Assignments:

Except under extenuating circumstances, all projects and assignments are due at the beginning of class on the scheduled due date. Incomplete work will not be accepted. Late work (without excused absence) will be penalized five points per class period until it is turned in.

Students with excused absences (proof required) will be given a revised deadline. Under these circumstances work not turned in by the revised due date will be subject to the five pint per class day deduction as described in the preceding paragraph. Please remember that whether you are in class or absent, you are still responsible for the material. Students with more than two unexcused absences will lose 2 points from their final course grade for each additional unexcused absence.

Plagiarism:

Any student found to be presenting another’s work as his or her own will be referred to the Academic Honesty Committee for appropriate action. Cheating will be handled in the same manner.

Contingency Plan:

If normal class activities are disrupted due to illness, emergency, or crisis situation (such as an H1N1 flu outbreak), the syllabus and other course plans and assignments may be modified to allow completion of the course. If this occurs, an addendum to the course syllabus and/or course assignments will replace the original materials.