IE-352
Section 1, CRN: 48700/1/2
Section 2, CRN: 48703/4/5
Section 3, CRN: 48706/7/8
Section 4, CRN: 58626/7/8
Second Semester 1437-38 H (Spring-2017) – 4(4,1,2)
"MANUFACTURING PROCESSES – 2"

Monday, Apr. 17, 2017 (26/07/1438H)

Course Project [10 Points]

Review of "Advanced Machining" Process.

You are required to locate, read, summarize, and present recent scientific literature on any advanced (or non-traditional) machining process. Please read the following rules carefully:

a) **Examples** of advanced machining include ultrasonic, chemical, electrochemical, electrical discharge, laser-beam, electron-beam, water-jet, abrasive-jet, and hybrid machining. Other such topics are also acceptable.

b) The literature must be **scientific**! You are highly advised to use a scientific search database to help you in your research.

c) Use at least **two** (2) references, at least one of which is a journal or conference publication, obtained from a major scientific database (such as *Science Direct*). The second reference may be authentic learning material obtained either from a textbook, or acquired online.

d) The references must present a fairly **recent** topic, preferably within the last three to five years.

e) **Academic honesty** rules seriously apply. Therefore, you are required to use your own words in summarizing, linking, and drawing conclusions from this work. Simply copying and pasting will not be accepted!

f) You will earn more credit if you are able to **show a relationship** between your research and content covered during the course. For example, you may want to show a recent development of some of the data or research shown in one of the chapters covered in class.

g) You must attach all **physical references** (not just links) used as an appendix to your report. You must also properly **cite** all your references.

h) The **report** must include the following sections:

- Introduction of selected process
- Advantages and disadvantages

- Applications
- Main process parameters
- A case study from the article (e.g. in biomedical or other engineering applications)
- References
- Who did what section

i) You will **present** a summary of your research as described in the rules section below.

j) Include a slide in your presentation that lists your **references**.

Important Rules and Reminders:

- You are required to work in a team of no less than **3** and no more than **4** students. No exceptions! You must dedicate a section of you report to show "**who did what**".
- All presented work must be neatly **typed, printed, and bound**. No handwritten work will be accepted. Note, besides content and quality, you will also be graded on your spelling, grammar, formatting, neatness, etc.
- You **must submit** the following:
  - A *printed* and *bound* **report** showing all steps and details of the complete work accomplished in this project.
  - Printout of slides used in your **presentation** (use 2-4 per page; grayscale).
  - A copy of all **publications** you have used, photos, and any other material and/or references that add value, and authenticity to your work. Remember, you will be monitored for plagiarism.
  - Attached, labeled **CD** containing all the above-mentioned items (most importantly the **report**, **presentation**, and **publications**). **Points will be deducted** for one or more missing items from the above list.
  - Note, you must submit all work **on the day of your scheduled presentation**. No late work will be accepted.
- Your group will be required –collectively– to perform a **4-5 minute** presentation. **Points will be deducted** if you exceed the time limit. This will be held on the following date:
  - **Thursday, May 11th, 2017** (15/08/1438H). Note, the time and location will be announced at a later time.

- Note, besides the quality of the content of your work, you will receive a grade for your overall presentation and speech skills, as well as your PowerPoint slides. **All group members** must participate in this activity.

We wish you the very best with this project, and hope you can both learn and enjoy working on it.