Finance for Engineering Management
ENG 566 / TE 566 | Spring 2022 Semester (8 Week Course)

Instructors:

Brian Lilly, PhD
Brian's entrepreneurial experience includes founding and managing several companies. He is president of Smart Solutions, Inc., which manufactures and sells products he designed for outdoor recreation and vehicle industries, and is also vice president of Ergo-Tech, Inc., which manufactures and sells a patented line of industrial washdown equipment throughout North America.

Professor Lilly received his B.S. and M.S. in General Engineering and his Ph.D. in Aeronautical Engineering from the University of Illinois at Urbana-Champaign.

Email: blillytec@gmail.com
Phone: (217) 552-3737

Assistants

Siddharth Bhujle
Email: sbhujle2@illinois.edu

** This syllabus may be updated throughout the semester **
Location:
Online. For the purpose of assignment submission dates, the class periods are 2 PM - 3:50 PM Thursday

Office Hours:
Right after each class period. Can schedule a time to meet if necessary.

Text: Inexpensive and available through Amazon
Title: Understanding Financial Statements – A Primer of Useful Information
Author: Gill and Chatton
ISBN: 978-1-56052-425-0

Course Description:
Finance for Engineering Management introduces engineers to the important elements and metrics of business finance and contemporary engineering economics. The course covers a broad range of topics and explains the relationships between customers, employees, and shareholders in a corporate environment. The course covers the cornerstone financial concepts for engineering management to enable analysis of engineering projects from a financial perspective: income statements; the balance sheet; cash flow statements; financial ratio analysis; corporate organization; the time value of money; net present value; and discounted cash flow analysis are among the topics discussed.
Homework & Assignment

Assignments should be submitted through Compass. Homework assignments and due dates will be posted on the syllabus in compass. A major homework effort involves producing a finance program in excel or a programming language of your choice that performs many of the basic functions that a small business software package is designed to do. Various modules will be created throughout the course with the final program being the integration of the various modules. Homework assignments will be announced throughout the course.

There are 13 videos in the course. These are my pre-recorded lectures from a past semester. Please turn in a 10-bullet point list of takeaways from the lecture. This will ensure that you have viewed the video. Submit prior to the next class period to the video bullet points folder found in the assignments tab.

Quizzes

For all students, the quiz will be open-book submitted through Compass. It is essentially a long homework assignment.

Grading Breakdown

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Bullet points of video lectures</td>
</tr>
<tr>
<td>30%</td>
<td>Individual homework assignments (no credit given for late homework)</td>
</tr>
<tr>
<td>10%</td>
<td>Quiz</td>
</tr>
<tr>
<td>50%</td>
<td>Final Software Program</td>
</tr>
</tbody>
</table>

Grading Scale

<table>
<thead>
<tr>
<th>Letter</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100%</td>
</tr>
<tr>
<td>A-</td>
<td>90-93%</td>
</tr>
<tr>
<td>B+</td>
<td>86-89%</td>
</tr>
<tr>
<td>B</td>
<td>82-85%</td>
</tr>
<tr>
<td>B-</td>
<td>79-81%</td>
</tr>
<tr>
<td>C+</td>
<td>75-78%</td>
</tr>
<tr>
<td>C</td>
<td>70-74%</td>
</tr>
<tr>
<td>C-</td>
<td>67-69%</td>
</tr>
<tr>
<td>D+</td>
<td>63-66%</td>
</tr>
<tr>
<td>D</td>
<td>60-63%</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60%</td>
</tr>
</tbody>
</table>

Outline of Sessions

As you watch the lectures and the tutorials about programming, the following assignments will help track progress.

- Homework #1 -- Accounting tools assignment.
- Homework #2 -- Balance sheet assignment.
- Homework #3 -- Income sheet assignment.
• Midterm Quiz -- The Midterm quiz, this will cover material from the first 8 lectures
• Computer Program-- A computer program will be coded which tracks invoicing, purchasing, payroll, and inventory for your future startup company. The program inputs and outputs are described in detail in the instructional guide. A sample of the expected output is also provided. This program description is available on compass and can be started immediately.

Class Schedule:

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Lecture/Discussion</th>
<th>Assignments Due as noted</th>
</tr>
</thead>
</table>
| Day 1 | 1/20  | Zoom office hours 2 pm – 2:50 pm     | Watch video 1.  
   Turn in 10 bullet points from video 1. Due prior to Day 2.  
   Homework 1 handed out. Due prior to Day 2.  
   Final Computer Program assignment posted. Due prior to Day 8. |
| Day 2 | 1/27  | Zoom office hours 2 pm - 2:50 pm     | Watch video 2 and 3  
   Homework 2 handed out. Due prior to Day 4  
   Turn in 10 bullet points from Video 2 and 3  
   Due prior to day 3                                                                                     |
| Day 3 | 2/3   | Zoom office hours 2 pm - 2:50 pm     | Watch video 4  
   Homework 3 handed out. Due prior to Day 5  
   Turn in 10 bullet points from Video 4 Due prior to Day 4                                              |
| Day 4 | 2/3   | Zoom office hours 2 pm - 2:50 pm     | Watch video 5 6  
   Work steadily on computer program  
   Turn in 10 bullet points from video 5. Due prior to Day 6.                                              |
| Day 5 | 2/10  | Zoom office hours 2 pm - 2:50 pm     | Watch video 7 8  
   Work steadily on computer program  
   Turn in 10 bullet points from video 4. Due prior to next class 9/7 Day 7.                              |
| Day 6 | 2/17  | Zoom office hours 2 pm – 2:50 pm     | Watch videos 9 10  
   Work steadily on computer program  
   Quiz handed out. Due prior to Day 7.  
   Turn in 10 bullet points from video 9 and 10. Due prior to next class 9/7 Day 7.                          |
| Day 7 | 2/24  | Zoom office hours 2 pm – 2:50 pm     | Watch video 11 12 13  
   Work steadily on computer program  
   Turn in 10 bullet points from video 11 12 13. Due prior to Day 8.                                         |
| Day 8 | 3/3   | Zoom office hours 2 pm - 2:50 pm     |                                                                         |
COVID

Following University policy, all students are required to engage in appropriate behavior to protect the health and safety of the community, including wearing a facial covering properly, maintaining social distance (at least 6 feet from others at all times), disinfecting the immediate seating area, and using hand sanitizer. Students are also required to follow the campus COVID 19 testing protocol.

Students who feel ill must not come to class. In addition, students who test positive for COVID 19 or have had an exposure that requires testing and/or quarantine must not attend class. The University will provide information to the instructor, in a manner that complies with privacy laws, about students in these latter categories. These students are judged to have excused absences for the class period and should contact the instructor via email about making up the work.

Students who fail to abide by these rules will first be asked to comply; if they refuse, they will be required to leave the classroom immediately. If a student is asked to leave the classroom, the non-compliant student will be judged to have an unexcused absence and reported to the Office for Student Conflict Resolution for disciplinary action. Accumulation of non-compliance complaints against a student may result in dismissal from the University.

Emergency Response Recommendations

Emergency response recommendations can be found at the following website: http://police.illinois.edu/emergency-preparedness/. I encourage you to review this website and the campus building floor plans website within the first 10 days of
Sexual Misconduct Reporting Obligation

The University of Illinois is committed to combating sexual misconduct. Faculty and staff members are required to report any instances of sexual misconduct to the University’s Title IX Office. In turn, an individual with the Title IX Office will provide information about rights and options, including accommodations, support services, the campus disciplinary process, and law enforcement options. A list of the designated University employees who, as counselors, confidential advisors, and medical professionals, do not have this reporting responsibility and can maintain confidentiality, can be found here: wecare.illinois.edu/resources/students/#confidential. Other information about resources and reporting is available here: wecare.illinois.edu.

Academic Integrity

The University of Illinois at Urbana-Champaign Student Code should also be considered as a part of this syllabus. Students should pay particular attention to Article 1, Part 4: Academic Integrity. Read the Code at the following URL: http://studentcode.illinois.edu/. Academic dishonesty may result in a failing grade. Every student is expected to review and abide by the Academic Integrity Policy: https://studentcode.illinois.edu/article1/part4/1-401/. Ignorance is not an excuse for any academic dishonesty. It is your responsibility to read this policy to avoid any misunderstanding. Do not hesitate to ask the instructor(s) if you are ever in doubt about what constitutes plagiarism, cheating, or any other breach of academic integrity.

Religious Observances

Illinois law requires the University to reasonably accommodate its students’ religious beliefs, observances, and practices in regard to admissions, class attendance, and the scheduling of examinations and work requirements. You should examine this syllabus at the beginning of the semester for potential conflicts between course deadlines and any of your religious observances. If a conflict exists, you should notify your instructor of the conflict and follow the procedure at https://odos.illinois.edu/community-of-care/resources/students/religious_observances/ to request appropriate accommodations. This should be done in the first two weeks of classes.

Disability-Related Accommodations

To obtain disability-related academic adjustments and/or auxiliary aids, students with disabilities must contact the course instructor and the Disability Resources and Educational Services (DRES) as soon as possible. To contact DRES, you may visit 1207 S. Oak St., Champaign, call 333-4603, e-mail disability@illinois.edu or go to https://www.disability.illinois.edu. If you are class. http://police.illinois.edu/emergency-preparedness/building-emergency-action-plans/.
concerned you have a disability-related condition that is impacting your academic progress, there are academic screening appointments available that can help diagnosis a previously undiagnosed disability. You may access these by visiting the DRES website and selecting “Request an Academic Screening” at the bottom of the page.

**Family Educational Rights and Privacy Act (FERPA)**
Any student who has suppressed their directory information pursuant to Family Educational Rights and Privacy Act (FERPA) should self-identify to the instructor to ensure protection of the privacy of their attendance in this course. See [https://registrar.illinois.edu/academic records/ferpa/](https://registrar.illinois.edu/academic records/ferpa/) for more information on FERPA.