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| **1. Course title/number, number of credit hours** |
| Engineering Technology Capstone (ETG4950) | 3 credit hours |
| **2. Course prerequisites, corequisites, and where the course fits in the program of study** |
| Prerequisite: Senior Standing and Department Permission |
| **3. Course logistics** |
| *Semester*: Spring 2019Classroom: CM 125 for In-person class; recorded videos will be available for DisL studentsClass time: Monday, 7:10PM – 10:00PM |
| **4. Instructor contact information** |
| Dr. Sudhagar NagarajanBuilding: 36, Room: 222Boca Raton, FLPhone: (561) 297 3104E-mail: snagarajan@fau.eduOffice hours: MT 8:30 AM – 10:30 AM |
| **5. Course description** |
| Design teams are formed for capstone design projects with multiple realistic constraints focused on engineering technology professional practice issues. |
| **6. Course objectives/student learning outcomes/program outcomes** |
| *Course objectives* | A. To understand the design process by working on a real world project with multiple realistic constraintsB. To learn to function effectively as a member or leader on a technical team to accomplish the objectives of an engineering planC. To apply written, oral, and graphical communication to report technical concepts to meet project requirements |
| *Student learning outcomes**& relationship to ABET a-k objectives* | 1. An ability to complete a professional quality design deliverable (a,b,c,d,e,f,g,h,i,j,k)2. An ability to be an effective team member (e)3. An ability to communicate effectively (g) |

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| *Relationship to program outcomes* | H | (A) Practice within the engineering technical fields such as planning and preparing documents appropriate for analysis, design, and other engineering related activities in organizations that employ them |
| M | (B) Advance their knowledge of engineering practices, both formally and informally, by engaging in lifelong learning experiences, including graduate studies |
| H | (C) Serve as effective professionals, based on strong interpersonal and teamwork skills, capable of performing economic analyses and cost estimates to select appropriate engineering materials and practices related to design of engineering systems  |
| H | (D) Participate as leaders in activities that support performance of standard analysis and design in engineering fields. |
| **7. Course evaluation method** |
| Proposal: 25%Progress Reports: 15%Written Report: 35%Oral Report: 20% |
| **8. Policy on makeup tests, late work, and incompletes** |
| Makeup tests are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student of participating in the exam. Makeup exam should be administered and proctored by department personnel unless there are other pre-approved arrangements.Incomplete grades are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given. |
| **9. Special course requirements** |
| Assignments must be handed in on the due date. Late submissions will not be accepted unless approved by the instructor in advance. |
| **10. Classroom etiquette policy** |
| University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones and laptops, are to be disabled in class sessions. |
| **11. Disability policy statement** |
| In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS)—in Boca Raton, SU 133 (561-297-3880); in Davie, LA 131 (954-236-1222); or in Jupiter, SR 110 (561-799-8585) —and follow all SAS procedures. |
| **12. Honor code policy** |
| Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at www.fau.edu/regulations/chapter4/4.001\_Honor\_Code.pdf. |
| **13. Required texts/reading** |
| 1. Materials as needed for the design project development
2. Handouts provided by instructor
3. Canvas registration

Optional: * “Geomatics engineering – A Practical Guide to Project Design”, by Clement A. Ogaja, 2011¸CRC Press, ISBN 978-1-4398-1743-8
* Bloetscher, F. & Meeroff, D.E. (2015). Practical Concepts for Capstone Design Engineering, J Ross Publishing. ISBN-10: 1604271140; ISBN-13: 978-1604271140
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| **14. Course topical outline, including dates for exams/quizzes, papers, completion of reading** |
| Week 1: Course overview, introduction, expectations, review of design projects, assign teamsWeek 2: Martin Luther King Jr. HolidayWeek 3: Communications, software requirements, proposal writing and procurementWeek 4: Project management, scheduling, team dynamics, progress report writing Week 5: Professional quality, engineering ethics, engineering economicsWeek 6: Alternative AnalysisWeek 7: Draft ProposalWeek 8: ProposalWeek 9: Spring breakWeek 10: Progress report 1Week 11: Engineering specificationsWeek 12: Progress report 2Week 13: Practice Oral Presentation and Draft Final DocumentWeek 14: Final ReviewWeek 15: Oral Presentation and Final Document  |