

Solid Mechanics, Design and Manufacturing (SMDM) Graduate Course Projections

Latest Revision 1/30/2017

Nagaraj Arakere

| Course No.                            | Course Title                                | M | 2014 |    |   | 2015 |    |   | 2016 |    |   | 2017 |    |   |
|---------------------------------------|---|---|------|----|---|------|----|---|------|----|---|------|----|---|
|                                       |   |   | S    | SS | F | S    | SS | F | S    | SS | F | S    | SS | F |
| <b>Core Courses – Offered on EDGE</b> |   |   |      |    |   |      |    |   |      |    |   |      |    |   |
| EML 5526                              | Finite Element Analysis                     | 2 | ◆    |    |   | ◆    |    | ◆ |      |    | ◆ |      |    | ◆ |
| EML 5533                              | Applied Elasticity and Adv Solid Mech       | 2 |      |    | ◆ |      |    | ◆ |      |    | ◆ |      |    | ◆ |
| EGM 6611                              | Continuum Mechanics                         | 2 | ◆    |    |   | ◆    |    |   | ◆    |    |   | ◆    |    |   |
| EML 6324                              | Fundamentals of Production Engineering      | 2 |      |    | ◆ |      |    | ◆ |      |    | ◆ |      |    | ◆ |
| EML 6934                              | Failure of Materials in Mechanical Design   | 2 |      |    | ◆ |      |    |   | ◆    |    |   | ◆    |    |   |
| <b>Elective Courses</b>               |   |   |      |    |   |      |    |   |      |    |   |      |    |   |
| EML 5045                              | Comp Meth for Design and Manufacturing      | 4 |      |    |   | •    |    |   |      |    |   |      |    | • |
| EGM 5111L                             | Experimental Stress Analysis                | 4 | •    |    |   |      |    |   | •    |    |   |      |    |   |
| EML 5318                              | Computer Control of Machines and Processes  | 4 |      |    | • |      |    |   |      |    | • |      |    |   |
| EGM 5584                              | Biomechanics of Soft Tissue                 | 4 |      |    |   |      |    | • |      |    |   |      |    | • |
| EAS 6939                              | Aerospace Structural Composites (+UG)       | 2 | •    |    |   | •    |    |   | •    |    |   | •    |    |   |
| EAS 6242                              | Advanced Structural Composites              | 4 |      |    |   |      |    | ◆ |      |    |   |      |    | ◆ |
| EML 6267                              | Advanced Manuf Processes                    | 4 |      |    |   | ◆    |    |   |      |    |   | ◆    |    |   |
| EGM 6352                              | Advanced Finite Element Analysis            | 2 |      |    | • |      |    |   | •    |    |   | •    |    |   |
| EML 6934                              | Tribology                                   | 4 |      |    |   |      |    | • |      |    |   |      |    |   |
| EGM 6570                              | Fracture Mechanics                          | 4 |      |    |   |      |    |   | ◆    |    |   |      |    |   |
| EGM 6671                              | Inelastic Materials                         |   |      |    |   | ◆    |    |   |      |    |   | ◆    |    |   |
| EGM 6934                              | Computational Nanomech & Nano Matls         | 4 |      |    |   |      |    |   |      |    |   | •    |    |   |
| EML 6323                              | Nontraditional Manufacturing                | 4 | ◆    |    |   |      |    |   | ◆    |    |   |      |    |   |
| EML 6934                              | High Strain Rate Mech of Materials          | 4 |      |    | ◆ |      |    |   |      |    |   |      |    |   |
| EGM 6365                              | Structural Optimization                     | 3 |      |    |   |      |    | ◆ |      |    |   | ◆    |    |   |
| EAS 6939                              | Approximation and Opt in Eng Des.           | 3 |      |    |   |      |    | ◆ |      |    |   | ◆    |    |   |
| EAS 6934                              | VVU&Q                                       | 3 |      |    |   |      |    | ◆ |      |    |   | ◆    |    |   |
| <b>Computational Courses</b>          |   |   |      |    |   |      |    |   |      |    |   |      |    |   |
| EGM 6341                              | Numerical Methods of Engineering Analysis I | 2 | ◆    |    |   | ◆    |    |   | ◆    |    |   | ◆    |    |   |
| EGM 6321                              | Principles of Engineering Analysis 1        | 2 |      |    | ◆ |      |    | ◆ |      |    | ◆ |      |    | ◆ |
| EGM 6322                              | Principles of Engineering Analysis 2        | 2 | ◆    |    |   | ◆    |    |   | ◆    |    |   | ◆    |    |   |
| <b>Totals</b>                         |   |   | 7    |    | 7 | 8    |    | 8 | 9    |    | 5 | 10   |    | 7 |

M-Denotes number of semesters between course offerings

◆-Denotes course also offered on EDGE

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Latest Revision 1/30/2017

Nagaraj Arakere

| Course No. | Course Title                                | M | 2018     |    |          | 2019     |    |          | 2020      |    |          | 2021     |    |          |
|------------|---|---|----------|----|----------|----------|----|----------|-----------|----|----------|----------|----|----------|
|            |   |   | S        | SS | F        | S        | SS | F        | S         | SS | F        | S        | SS | F        |
|            | <b>Core Courses – Offered on EDGE</b>       |   |          |    |          |          |    |          |           |    |          |          |    |          |
| EML 5526   | Finite Element Analysis                     | 2 |          |    | ◆        |          |    | ◆        |           |    | ◆        |          |    | ◆        |
| EML 5533   | Applied Elasticity and Adv Solid Mech       | 2 |          |    | ◆        |          |    | ◆        |           |    | ◆        |          |    | ◆        |
| EGM 6611   | Continuum Mechanics                         | 2 | ◆        |    |          | ◆        |    |          | ◆         |    |          | ◆        |    |          |
| EML 6324   | Fundamentals of Production Engineering      | 2 |          |    | ◆        |          |    | ◆        |           |    | ◆        |          |    | ◆        |
| EML 6934   | Failure of Materials in Mechanical Design   | 2 | ◆        |    |          | ◆        |    |          | ◆         |    |          | ◆        |    |          |
|            | <b>Elective Courses</b>                     |   |          |    |          |          |    |          |           |    |          |          |    |          |
| EML 5045   | Comp Meth for Design and Manufacturing      | 4 |          |    |          |          |    | •        |           |    |          |          |    | •        |
| EGM 5111L  | Experimental Stress Analysis                | 4 | •        |    |          |          |    |          | •         |    |          |          |    |          |
| EML 5318   | Computer Control of Machines and Processes  | 4 |          |    | •        |          |    |          |           |    | •        |          |    |          |
| EGM 5584   | Biomechanics of Soft Tissue                 | 4 |          |    |          |          |    | •        |           |    |          |          |    | •        |
| EAS 6939   | Aerospace Structural Composites (+UG)       | 2 | •        |    |          | •        |    |          | •         |    |          | •        |    |          |
| EAS 6242   | Advanced Structural Composites              | 4 |          |    |          |          |    | ◆        |           |    |          |          |    | ◆        |
| EML 6267   | Advanced Manuf Processes                    | 4 |          |    |          | ◆        |    |          |           |    |          | ◆        |    |          |
| EGM 6352   | Advanced Finite Element Analysis            | 2 | •        |    |          | •        |    |          | •         |    |          | •        |    |          |
| EML 6934   | Tribology                                   | 4 |          |    |          |          |    |          |           |    |          |          |    |          |
| EGM 6570   | Fracture Mechanics                          | 4 | ◆        |    |          |          |    |          | ◆         |    |          |          |    |          |
| EGM 6671   | Inelastic Materials                         |   |          |    |          | ◆        |    |          |           |    |          | ◆        |    |          |
| EGM 6934   | Computational Nanomech & Nano Matls         | 4 |          |    |          | •        |    |          |           |    |          | •        |    |          |
| EML 6323   | Nontraditional Manufacturing                | 4 | ◆        |    |          |          |    |          | ◆         |    |          |          |    |          |
| EML 6934   | High Strain Rate Mech of Materials          | 4 |          |    | •        |          |    |          |           |    | •        |          |    |          |
| EGM 6365   | Structural Optimization                     | 3 |          |    | ◆        |          |    |          | ◆         |    |          |          |    | ◆        |
| EAS 6939   | Approximation and Opt in Eng Des.           | 3 |          |    | ◆        |          |    |          | ◆         |    |          |          |    | ◆        |
| EAS 6934   | VVU&Q                                       | 3 |          |    | ◆        |          |    |          | ◆         |    |          |          |    | ◆        |
|            | <b>Computational Courses</b>                |   |          |    |          |          |    |          |           |    |          |          |    |          |
| EGM 6341   | Numerical Methods of Engineering Analysis I | 2 | ◆        |    |          | ◆        |    |          | ◆         |    |          | ◆        |    |          |
| EGM 6321   | Principles of Engineering Analysis 1        | 2 |          |    | ◆        |          |    | ◆        |           |    | ◆        |          |    | ◆        |
| EGM 6322   | Principles of Engineering Analysis 2        | 2 | ◆        |    |          | ◆        |    |          | ◆         |    |          | ◆        |    |          |
|            | <b>Totals</b>                               |   | <b>9</b> |    | <b>7</b> | <b>9</b> |    | <b>7</b> | <b>10</b> |    | <b>6</b> | <b>9</b> |    | <b>8</b> |

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