

| School:   |             |   |                                | School of Engineering and School of Business Management                 |               | << Declaration of BEng major |               |             |               |             |               |             |               |           |     |    |   |  |  | << Declaration of BBA major |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|-------------|---|--------------------------------|---|---------------|------------------------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|-----------|-----|----|---|--|--|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Program:  |             |   |                                | Dual Degree Program (BEng in Chemical Engineering and BBA in Economics) |               | Student's Pathway            |               |             |               |             |               |             |               |           |     |    |   |  |  | Remarks                     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Course Offering Dept. (course code prefix)                | Course Code | Course Title / Courses List   | Credits                        | Year 1 Fall   | Year 1 Spring | Year 2 Fall                  | Year 2 Spring | Year 3 Fall | Year 3 Spring | Year 4 Fall | Year 4 Spring | Year 5 Fall | Year 5 Spring | Sub-total |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BEng in Chemical Engineering                              |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Engineering Fundamental Courses                           |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMP  | 1022P       | Note: COMP 1022P OR COMP 1023 OR COMP 2011 OR COMP 2012H  | 3-5                            |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMP  | 1023        | Introduction to Computing with Java   | 3                              |   | 3             |                              |               |             |               |             |               |             |               |           |     | 3  | Students should take COMP 1022P, COMP 1023, COMP 2011 or COMP 2012H which will also be used to substitute ISOM 2010 and to waive ISOM 2020  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMP  | 2011        | Introduction to Python Programming  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMP  | 2012H       | Programming with C++  | 4                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| COMP  | 2012H       | Honors Object-Oriented Programming and Data Structures  | 5                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHEM  | 1012        | General Chemistry B: Atomic Structure, Molecules, and Bonding Theories                              | 3                              | 3   |               |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1013        | Note: MATH 1013 OR MATH 1020 OR MATH 1023   | 3-4                            |   |               |                              |               |             |               |             |               |             |               |           |     |    | DDP students should take MATH 1013 or MATH 1020 or MATH 1023 to satisfy the requirements of both BEng and BBA degrees   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1020        | Calculus I  | 4                              | 3   |               |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1020        | Accelerated Calculus  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1023        | Honors Calculus I   | 4                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PHYS  | 1112        | Note: PHYS 1112 OR PHYS 1312  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PHYS  | 1312        | General Physics I with Calculus   | 3                              |   | 3             |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PHYS  | 1312        | Honors General Physics I  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Required Credits for Engineering Fundamental Courses      |             |   | 13-19                          | 6   | 6             | 0                            | 0             | 0           | 0             | 0           | 0             | 0           | 0             | 0         | 0   | 12 |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Major Required Courses and Electives                      |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 1000        | Foundations of Chemical and Biological Engineering  | 3                              | 3   |               |                              |               |             |               |             |               |             |               |           |     | 3  | NOTE: Those entering the department in Year 2 will takethis course in Year 2 Fall.  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 1010        | Academic and Professional Development I   | 0                              | 0   |               |                              |               |             |               |             |               |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 1110        | Introduction to Chemical Engineering  | 3                              |   | 3             |                              |               |             |               |             |               |             |               |           |     | 3  | NOTE: Those entering the department in Year 2 will takethis course in Year 2 Fall.  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 1500        | A First Course on Materials Science and Applications  | 3                              |   |               | 3                            |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 2210        | Chemical and Biological Engineering Thermodynamics  | 3                              |   |               |                              | 3             |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 2220        | Transport Phenomena I   | 3                              |   |               |                              |               | 3           |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 2310        | Modeling for Chemical and Biological Engineering  | 3                              |   |               | 3                            |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 2320        | Modeling for Chemical and Biological Engineering II   | 3                              |   |               |                              | 3             |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3110        | Process Dynamics and Control  | 3                              |   |               |                              |               |             | 3             |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3150        | Integrated Chemical Process & Product Design  | 5                              |   |               |                              |               |             | 5             |             |               |             |               |           |     | 5  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3210        | Separation Processes  | 3                              |   |               |                              |               | 3           |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3220        | Transport Phenomena II  | 3                              |   |               |                              |               |             | 3             |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3230        | Chemical and Biological Reaction Engineering  | 3                              |   |               |                              |               | 3           |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3300        | Data Science for Molecular Engineering  | 3                              |   |               |                              |               | 3           |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 3950        | Chemical and Environment Engineering Laboratory   | 4                              |   |               |                              |               |             | 4             |             |               |             |               |           |     | 4  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 4020        | Academic and Professional Development II  | 0                              |   |               |                              |               |             | 0             |             |               |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 4920        | Note: CENG 4920 OR CENG 4930 OR CENG 4940 (Students taking the Research Option must take CENG 4930) | 6                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 4920        | Chemical Engineering Capstone Design  | 6                              |   |               |                              |               |             |               |             |               |             | 3             |           | 3   | 6  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 4930        | Chemical Engineering Thesis Research  | 6                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG  | 4940        | Chemical Engineering Industrial Project   | 6                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BIEN  | 2410        | Note: BIEN2410 OR BIEN2610 OR LIFS1901  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    | 3   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BIEN  | 2610        | Cellular and Systems Physiology for Engineers   | 3                              |   |               | 3                            |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LIFS  | 1901        | Chemical Biology for Engineers  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LIFS  | 1901        | General Biology I   | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHEM  | 1052        | Laboratory for General Chemistry B  | 1                              |   | 1             |                              |               |             |               |             |               |             |               |           |     | 1  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHEM  | 2111        | Fundamentals of Organic Chemistry   | 3                              |   |               | 3                            |               |             |               |             |               |             |               |           |     | 3  | CHEM 2111 offered in Fall   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CHEM  | 2155        | Fundamental Organic Chemistry Laboratory  | 1                              |   |               | 1                            |               |             |               |             |               |             |               |           |     | 1  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CENG/BIEN/COMP/ENEG/CHEM                                  |             | CENG Elective (Courses from the specified list)   | 12                             |   |               |                              |               |             |               | 3           | 3             | 3           | 3             |           |     | 12 |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BEng in Chemical Engineering Major Requirements           |             |   | 71                             | 3   | 4             | 13                           | 6             | 12          | 15            | 3           | 3             | 6           | 6             |           | 71  |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BBA in Economics  |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| School Requirements                                       |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ACCT  | 2010        | Principles of Accounting I  | 3                              |   |               | 3                            |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ACCT  | 2200        | Principles of Accounting II   | 3                              |   |               |                              |               |             | 3             |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 2103        | Note: ECON 2103 OR ECON 2113  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    | ECON 2103 / 2113 / 2123 is a major pre-requisite  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 2113        | Principles of Microeconomics  | 3                              |   | 3             |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 2113        | Microeconomics  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 2123        | Note: ECON 2123 OR ECON 3123  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 3123        | Macroeconomics  | 3                              |   |               |                              |               | 3           |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 3123        | Macroeconomic Theory I  | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FINA  | 2303        | Financial Management  | 3                              |   |               |                              | 3             |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISOM  | 2010        | Introduction to Information Systems   | 3                              | -   | -             | -                            | -             | -           | -             | -           | -             | -           | -             | -         | -   | 0  | COMP 1023, COMP 2011 and COMP 2012H are more advanced computing courses as compared to ISOM 2010. Students SHOULD take COMP1023 or COMP2011 or COMP2012H instead of ISOM 2010.                |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISOM  | 2020        | Coding for Business   | 1                              | -   | -             | -                            | -             | -           | -             | -           | -             | -           | -             | -         | -   | 0  | ISOM 2020 is waived for DDP students who have taken and passed COMP 1023, COMP 2011 and COMP 2012H. These two COMP courses are similar or more advanced coding (Python) courses as ISOM 2020. |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISOM  | 2500        | Business Statistics   | 3                              | -   | -             | -                            | -             | -           | -             | -           | -             | -           | -             | -         | -   | 0  | Substituted by CIVL 2160  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISOM  | 2600        | Introduction to Business Analytics  | 1                              |   |               |                              |               | 1           |               |             |               |             |               |           |     | 1  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ISOM  | 2700        | Operations Management   | 3                              |   |               |                              |               |             |               |             |               |             | 3             |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MARK  | 2120        | Marketing Management  | 3                              |   |               |                              | 3             |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MGMT  | 2010        | Business Ethics and the Individual  | 2                              |   |               |                              |               |             |               |             |               |             | 2             |           |     | 2  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MGMT  | 2110        | Organizational Behavior   | 3                              |   |               |                              |               |             |               |             |               | 3           |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MGMT  | 2130        | Business Ethics and Social Responsibility   | 2                              |   |               |                              |               |             |               |             |               |             |               | 2         |     | 2  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1003        | Note: MATH 1003 OR MATH 1013 OR MATH 1020 OR MATH 1023  | 3-4                            |   |               |                              |               |             |               |             |               |             |               |           |     |    | DDP students should take MATH 1013 or MATH 1020 or MATH 1023 to satisfy the requirements of both BEng and BBA degrees   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1013        | Calculus and Linear Algebra   | 3                              | (3)   |               |                              |               |             |               |             |               |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1020        | Calculus IB   | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1023        | Accelerated Calculus  | 4                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MATH  | 1023        | Honors Calculus I   | 3                              |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Required credits for School Requirements                  |             |   | 39-40                          | 3   | 3             | 3                            | 6             | 1           | 0             | 6           | 3             | 5           | 2             |           | 29  |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Major Required Courses and Electives                      |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 3014        | Managerial Microeconomics   | 4                              |   |               |                              |               | 4           |               |             |               |             |               |           |     | 4  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 3024        | Managerial Macroeconomics   | 4                              |   |               |                              |               |             | 4             |             |               |             |               |           |     | 4  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  | 3334        | Introduction to Econometrics  | 4                              |   |               |                              |               |             |               | 4           |               |             |               |           |     | 4  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ECON  |             | ECON 4000-level Electives (Any 3 courses of the subject and level as specified)                     | 11                             |   |               |                              |               |             |               |             | 4             | 4           | 3             |           |     | 11 |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Required Credits for Major Required Courses and Electives |             |   | 23                             | 0   | 0             | 0                            | 0             | 4           | 4             | 4           | 4             | 4           | 3             |           | 23  |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Additional Requirement for Dual Degree                    |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Requirements for Dual Degree Program                      |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 1011        | T&M Professional Activities I   | 0                              | 0   | 0             |                              |               |             |               |             |               |             |               |           |     | 0  | To graduate, students should complete ALL requirements as specified for DDP.  |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 1012        | T&M Professional Activities II  | 0                              |   |               | 0                            | 0             |             |               |             |               |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 1013        | T&M Professional Activities III   | 0                              |   |               |                              |               | 0           | 0             |             |               |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 1014        | T&M Professional Activities IV  | 0                              |   |               |                              |               |             |               | 0           | 0             |             |               |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 1015        | T&M Professional Activities V   | 0                              |   |               |                              |               |             |               |             |               | 0           | 0             |           |     | 0  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 3950        | T&M Case Analysis and Product Innovation  | 3                              |   | 3             |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TEMG  | 4950        | T&M Corporate Consulting Project  | 3-5                            |   |               |                              |               |             |               |             | 4             |             |               |           |     | 4  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Required Credits for Additional Requirements              |             |   | 7                              | 0   | 3             | 0                            | 0             | 0           | 0             | 4           | 0             | 0           | 0             |           | 7   |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| University Common Core Requirement                        |             |   |                                |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CORE  | C3 - C9     | U CORE - Others   | 21                             |   |               | 3                            | 6             |             |               |             |               | 6           | 3             | 3         |     | 21 |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CORE  | C1 & C2     | U CORE - English Language   | 6                              | 3   | 3             |                              |               |             |               |             |               |             |               |           |     | 6  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| HMAW  | 1905        | Behavioral Foundations of University Education: Habits, Mindsets, and Wellness                      | 3                              | 1   | 2             |                              |               |             |               |             |               |             |               |           |     | 3  |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sub-total for University CORE                             |             |   | 30                             | 4   | 5             | 3                            | 6             | 0           | 0             | 0           | 6             | 3           | 3             |           | 30  |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |             |   | Term load (excl. free credits) |   |               |                              |               |             |               |             |               |             |               |           | 172 |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |             |   | 16                             | 21  | 19            | 18                           | 17            | 19          | 17            | 16          | 18            | 14          |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |
|   |             |   | 175##                          |   |               |                              |               |             |               |             |               |             |               |           |     |    |   |  |  |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |