## **CHEMICAL ENGINEERING BSE Plan Requirements**

RG = Requirement Group RQ = Requirement Campus: **UMICH** 

Career: **UENG** LN = Line

Program:

Plan: 1250BSE

#### CHEMICAL ENGINEERING MAJOR REQUIREMENTS **RG 6218**

Effective FA05/1560 (09/06/2005)

| RQ 4703<br>Effective FA10<br>LN 0010<br>LN 0020<br>LN 0030<br>LN 0040<br>LN 0050     | Program Subjects 0/1810 (09/07/2010) CHE 230, 330, 341, 342, 343, 344, 360, 485 (C- or higher) Less than Minimum Grade (make no exceptions here) CHE 460, 466 CHE 487 or (CHE 488 and 489) CHE 488 and 489   |
|--|--|
| Effective FA08<br>LN 0010<br>LN 0020<br>LN 0030<br>LN 0040<br>LN 0050                | 3/1710 (09/02/2008)  CHE 230, 330, 341, 342, 343, 344, 360 (C- or higher)  Less than Minimum Grade (make no exceptions here)  CHE 460, 466, 487  CHE 487 or (CHE 488 and 489)  CHE 488 and 489   |
| Effective WN0<br>LN 0010<br>LN 0020<br>LN 0030                                       | 8/1670 (01/03/2008)<br>CHE 230, 330, 341, 342, 343, 344, 360 (C- or higher)<br>Less than Minimum Grade (make no exceptions here)<br>CHE 460, 466, 487  |
| Effective FA05<br>LN 0010<br>LN 0020<br>LN 0030                                      | 5/1560 (09/06/2005)<br>CHE 230, 330, 341, 342, 343, 344, 360 (C- or higher)<br>Less than Minimum Grade (make no exceptions here)<br>CHE 460, 466, 487  |
| LN 0010<br>LN 0015<br>LN 0020<br>LN 0025   | Advanced Chemistry  8/1670 (01/03/2008)  CHEM 210 (C- or higher) OR  CHEM 210 (external transfer)  CHEM 211 (C- or higher) OR  CHEM 211 (external transfer)  |
| LN 0030<br>LN 0035<br>LN 0040<br>LN 0045<br>LN 0050<br>LN 0070<br>LN 0075<br>LN 0090 | CHEM 215 (C- or higher) OR CHEM 215 (external transfer) CHEM 216 (C- or higher) CHEM 216 (external transfer) Less than Minimum Grade (make no exceptions here) CHEM 260 or 261 (MATSCIE 242 or PHYSICS could be used as alternatives) OR CHEM 260 or 261 (external transfer) Excess CHEM (make no exceptions here) |

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| LN 0035<br>LN 0040<br>LN 0045<br>LN 0050<br>LN 0060<br>LN 0070<br>LN 0075<br>LN 0090 | CHEM 215 (external transfer) CHEM 216 (C- or higher) CHEM 216 (external transfer) Less than Minimum Grade (make no exceptions here) CHEM 241 and 242 CHEM 260 or 261 (MATSCIE 242 or PHYSICS could be used as alternatives) OR CHEM 260 or 261 (external transfer) Excess CHEM (make no exceptions here) |  |  |  |
|--|--|--|--|--|
| RQ 4705  | Related Technical Subjects   |  |  |  |
|  | 1810 (09/07/2010)  |  |  |  |
| LN 0010  | One course from BIOLOGY 162, 163, 172, 174, 195, 207, BIOLCHEM 415, 515, CEE 582   |  |  |  |
| LN 0020  | Excess BIOLOGY, BIOLCHEM, CEE (make no exceptions here)  |  |  |  |
| LN 0030  | MATSCIE 220 or 250 (C- or higher)  |  |  |  |
| LN 0040  | Less than Minimum Grade (make no exceptions here)  |  |  |  |
| LN 0050  | Excess MATSCIE 220 or 250 (make no exceptions here)  |  |  |  |
| LN 0060  | Engineering Electives  |  |  |  |
| LN 0080  | Excess Engineering Electives (make no exceptions here)   |  |  |  |
| LN 0085  | CHE 490 and 696  |  |  |  |
| Effective FA08/  | 1710 (09/02/2008)  |  |  |  |
| LN 0010  | One course from BIOLOGY 162, 163, 172, 174, 195, 207, BIOLCHEM 415, 515, CEE 582   |  |  |  |
| LN 0020  | Excess BIOLOGY, BIOLCHEM, CEE (make no exceptions here)  |  |  |  |
| LN 0030  | MATSCIE 220 or 250 (C- or higher)  |  |  |  |
| LN 0040  | Less than Minimum Grade (make no exceptions here)  |  |  |  |
| LN 0050  | Excess MATSCIE 220 or 250 (make no exceptions here)  |  |  |  |
| LN 0060  | Engineering Electives  |  |  |  |
| LN 0070  | Advanced Math, Science, Engineering, or Other Technical Electives (6.0 units)  |  |  |  |
| LN 0075  | Limit of Research Credits (5.0 units)  |  |  |  |
| LN 0080  | Excess Advanced Math, Science, Engineering, or Other Technical Electives (make r   |  |  |  |
|  | exceptions here)   |  |  |  |
| LN 0090  | One course outside CHE (200 level or higher)   |  |  |  |
| LN 0100  | Related Technical Subjects total units   |  |  |  |
| Effective WN08   | /1670 (01/03/2008)   |  |  |  |
|  | One course from BIOLOGY 162, 163, 172, 174, 195, 207, BIOLCHEM 415, 515, CEE 582   |  |  |  |
| LN 0020  | Excess BIOLOGY, BIOLCHEM, CEE (make no exceptions here)  |  |  |  |
| LN 0030  | MATSCIE 220 or 250 (C- or higher)  |  |  |  |
| LN 0040  | Less than Minimum Grade (make no exceptions here)  |  |  |  |
| LN 0050  | Excess MATSCIE 220 or 250 (make no exceptions here)  |  |  |  |
| LN 0060  | Engineering Electives  |  |  |  |
| LN 0070  | Advanced Math, Science, Engineering, or Other Technical Electives (6 units + 4   |  |  |  |
|  | (241/242) - 1 (487) required)  |  |  |  |
| LN 0075  | Limit of Research Credits (8.0 units)  |  |  |  |
| LN 0080  | Excess Advanced Math, Science, Engineering, or Other Technical Electives (make no exceptions here)   |  |  |  |
| LN 0090  | One course outside CHE (200 level or higher)   |  |  |  |
| LN 0100  | Related Technical Subjects total units   |  |  |  |

Effective FA07/1660 (09/04/2007)

## CHEMICAL ENGINEERING BSE Plan Requirements

| LN 0010        | One course from BIOLOGY 162, 163, 172, 174, 195, 207, BIOLCHEM 415, 515, CEE 582                   |
|----------------|--|
| LN 0020        | Excess BIOLOGY, BIOLCHEM, CEE (make no exceptions here)  |
| LN 0030        | MATSCIE 220 or 250 (C- or higher)  |
| LN 0040        | Less than Minimum Grade (make no exceptions here)  |
| LN 0050        | Excess MATSCIE 220 or 250 (make no exceptions here)  |
| LN 0060        | Engineering Electives  |
| LN 0070        | Advanced Math, Science, Engineering, or Other Technical Electives (6.0 units)                      |
| LN 0075        | Limit of Research Credits (5.0 units)  |
| LN 0080        | Excess Advanced Math, Science, Engineering, or Other Technical Electives (make no exceptions here) |
| LN 0090        | One course outside CHE (200 level or higher)   |
| Effoctivo EAOS | /1560 (09/06/2005)   |
| LN 0010        | One course from BIOLOGY 162, 163, 172, 174, 195, 207, BIOLCHEM 415, 515, CEE                       |
| LIN 0010       | 582  |
| LN 0020        | Excess BIOLOGY, BIOLCHEM, CEE (make no exceptions here)  |
| LN 0030        | MATSCIE 220 or 250 (C- or higher)  |
| LN 0040        | Less than Minimum Grade (make no exceptions here)  |
| LN 0050        | Excess MATSCIE 220 or 250 (make no exceptions here)  |
| LN 0060        | Engineering Electives  |
| LN 0070        | Advanced Math, Science, Engineering, or Other Technical Electives (6.0 units)                      |
| LN 0080        | Excess Advanced Math, Science, Engineering, or Other Technical Electives (make no exceptions here) |
| LN 0090        | One course outside CHE (200 level or higher)   |

## RG 6219 CHEMICAL ENGINEERING RESIDENCY, GPA REQUIREMENTS

Effective FA05/1560 (09/06/2005)

| RQ 4706<br>Effective FA08 | Chemical Engineering Residency and GPA requirements //1710 (09/02/2008)   |
|---------------------------|---|
| LN 0010                   | Minimum 30 units of technical courses at the 300 level or higher  |
| LN 0020                   | Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00. |
| LN 0030                   | General Electives (make no exceptions here)   |
| LN 0040                   | Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for  |
|                           | Credit, Less Than Minimum Grades (make no exceptions here)  |
| Effective WN0             | 8/1670 (01/03/2008)   |
| LN 0010                   | Minimum 30 units of technical courses at the 300 level or higher  |
| LN 0020                   | Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00. |
| LN 0030                   | General Electives (make no exceptions here)   |
| LN 0040                   | Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for  |
|                           | Credit, Less Than Minimum Grades (make no exceptions here)  |
| Effective EAOS            | 5/1560 (09/06/2005)   |
| LN 0010                   | Minimum 30 units of technical courses at the 300 level or higher  |
|                           | •   |
| LN 0020                   | Major GPA. See your departmental advisor for the correct calculation if NFC and REP codes appear on your transcript and your major GPA is less than 2.00. |
| LN 0030                   | General Electives (make no exceptions here)   |
| LN 0040                   | Not Used for Graduation Requirement, Withdrawals, Failures, Incompletes, Not for Credit, Less Than Minimum Grades (make no exceptions here)               |
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## CHEMICAL ENGINEERING BSE Plan Requirements

## **Subplans**

|         | Electrical Engineering- | Energy Systems | Environmental | Life Sciences | Materials Science | Mechanical  |
|---------|-------------------------|----------------|---------------|---------------|-------------------|-------------|
|         | Electronic Devices      | Engineering    | Engineering   |               | and Engineering   | Engineering |
| Career  | UENG                    | UENG           | UENG          | UENG          | UENG              | UENG        |
| Program |                         |                |               |               |                   |             |
| Plan    | 1250BSE                 | 1250BSE        | 1250BSE       | 1250BSE       | 1250BSE           | 1250BSE     |
| Subplan | EEED                    | ENSYS          | ENVRNENG      | LIFESCI       | MATSCIENG         | MECHE       |
| RG      | In Progress             | 9822           | 8714          | 8713          | 9030              | 9031        |

#### RG 9822 ENERGY SYSTEMS ENGINEERING CONCENTRATION

Effective FA06/1610 (09/05/2006)

RQ 6224 Energy Systems Engineering Concentration

Effective FA06/1610 (09/05/2006) LN 0010 Technical Electives

LN 0020 Policy/Law

### RG 8714 ENVIRONMENTAL ENGINEERING CONCENTRATION

Effective FA06/1610 (09/05/2006)

**RQ 5305** Environmental Engineering Concentration

Effective FA06/1610 (09/05/2006)

LN 0010 Local Limit:3 from CEE 428&526 (make no exceptions here)

LN 0020 Technical Electives

LN 0030 Policy / Law

### RG 8713 LIFE SCIENCES CONCENTRATION

Effective FA06/1610 (09/05/2006)

RQ 5304 Life Sciences Concentration

Effective FA06/1610 (09/05/2006) LN 0010 Required Courses LN 0020 Elective Courses

### RG 9030 MATERIALS SCIENCE & ENGINEERING CONCENTRATION

Effective FA06/1610 (09/05/2006)

RQ 5650 Materials Science & Engineering Concentration

Effective FA06/1610 (09/05/2006)

LN 0010 MATSCIE 350

LN 0015 MATSCIE 490 - 3 units Limit (make no exceptions here)

LN 0020 Electives

### RG 9031 MECHANICAL ENGINEERING CONCENTRATION

Effective FA06/1610 (09/05/2006)

**RQ 5651** Mechanical Engineering Concentration

Effective FA06/1610 (09/05/2006) LN 0010 Required Courses

LIN 00 10 Required Courses

LN 0015 MECHENG 490 - 3 units Limit (make no exceptions here)

LN 0020 Electives