CHEMISTRY, B.S. Following TSAP Completion
CHEMISTRY (CHEM)
(Fall 2017-Summer 2018)

CHEMISTRY BSC COURSES & SUPPORTING COURSES (83 credits)  *Note: 2.0 CHM GPA required/2.0 CHM GPA in 300+ courses
*Program fulfills recommendations of the Committee on Professional training of the American Chemical Society (ACS), and B.S.C. graduates are certified.

1  CHM 19400  Freshman Chemistry Orientation
   TR  4  CHM 11500  General Chemistry
   TR  4  CHM 11600  General Chemistry
   TR  4  CHM 24100  Intro Inorganic Chemistry
   TR  3  CHM 26100  Organic Chemistry
   TR  2  CHM 26500  Organic Chemistry Lab
   TR  3  CHM 26200  Organic Chemistry
   TR  2  CHM 26600  Organic Chemistry Lab
   ___  1  CHM 28000  Chemical Literature
   ___  4  CHM 32100  Analytical Chemistry I
   ___  3  CHM 34200  Inorganic Chemistry
   ___  2  CHM 37600  Physical Chemistry Lab
   ___  4  CHM 38300  Physical Chemistry
   ___  2  CHM 38400  Physical Chemistry
   ___  4  CHM 42400  Analytical Chemistry II
   ___  1  CHM 49600  (0) Advances in Chemistry I and CHM 49700 (1) Advances in Chemistry II
   TR  4  MA  16500  Analytic Geometry & Calculus I
   TR  4  MA  16600  Analytic Geometry & Calculus II
   ___  4  MA  26100  Multivariate Calculus
   TR  5  PHYS 15200  Mechanics
   TR  5  PHYS 25100  Heat, Electricity and Optics

BSC CHEMISTRY OPTION
   ___  1  CHM  34300  Inorganic Chemistry Lab
   ___  3  CHM  53300  Introductory Biochemistry
   ___  3  Credits CHM Elective (CHM 3__, 4__, or 5__)  (See Bulletin or myBLUEprint for CHM elective courses)
   ___  3  MA  35100  Elementary Linear Algebra
   ___  3  MA  36300  Differential Equations
   ___  3  PHYS 34200  Modern Physics
   ___  1  PHYS 34300  Modern Physics Lab

A&S BS LIBERAL ARTS REQUIREMENTS (14 credits — credits may vary with double counting/language placement — see advisor)
   TR  3  Second Semester Writing (C- or higher)  (ENG W140 or ENG W233)
   TR  3  Speaking Requirement (C- or higher)  (COM 11400 or HIST H125)
   ___  8  Credits Language Sequence (credit/placement required for 2 semesters of foreign language)
          ___ (1st)  ___ (2nd)  one course at second semester level required
   Options: (Arabic, French, German, Japanese, Latin, Spanish)

GENERAL EDUCATION REQUIREMENTS (33 Credits)  *Note: grades of C- or higher required in Gen Ed/2.0 GPA
**Up to 6 credits in Gen Ed GA1 to GB7 and 3 credits GCAP (C8) may originate in major discipline—see advisor for more information.
   TR  3  GA1  Category A1 -- Written Communication  (See Bulletin or myBLUEprint for General Education courses)
   TR  3  GA2  Category A2 -- Speaking and Listening
   TR  3  GA3  Category A3 -- Quantitative Reasoning
   TR  3  GB4  Category B4 -- Scientific Ways of Knowing
   TR  3  GB5  Category B5 -- Social & Behavioral Ways of Knowing
   TR  3  GB6  Category B6 -- Humanistic and Artistic Ways of Knowing
   TR  3  GB7/71 Category B7 or B71 -- Interdisciplinary or Creative Ways of Knowing
   TR  9  Additional Credits -- Category A or B General Education courses
          ___  ___  ___
   ___  3  GCAP Category C8--Capstone Experience (IPFW course only)
* TR = Transfer Credit through TSAP Program

IPFW Residency Requirements:  ____ 32 credits at 200 level or above at IPFW  ____ with 15 of 32 credits at 300-400 in major
B.S. Requirements:  ____120 credits  ____30 credits 300–400 level  ____2.0 GPA Degree/Major/Gen Ed  ____C- or above in Gen Ed
## CHEMISTRY, B.S.C. Following TSAP Completion
### PLAN—CHEMISTRY OPTION (CHEC)
(Fall 2017-Summer 2018)

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Pre-Reqs</th>
<th>Crs.</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Pre-Reqs</th>
<th>Crs.</th>
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<tr>
<td>CHM 19400</td>
<td>Freshmen CHEM orient</td>
<td></td>
<td>1</td>
<td>MA 35100</td>
<td>Elem Linear Algebra</td>
<td>2 sem calc (C- or above grades)</td>
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<td>MA 26100</td>
<td>Multivariate Calculus</td>
<td>MA 166 (C- or above)</td>
<td>4</td>
<td>PHYS 34200</td>
<td>Modern Physics</td>
<td>PHYS 241 or 251 or 261</td>
<td>3</td>
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<tr>
<td>CHM 24100</td>
<td>Intro Inorganic Chemistry</td>
<td>CHM 216; MA 165 or 229</td>
<td>4</td>
<td>PHYS 34300</td>
<td>Modern Physics Lab</td>
<td>C: PHYS 342</td>
<td>1</td>
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<tr>
<td>CHM 28000</td>
<td>Chemical Literature</td>
<td>CHM 251 or 255 or 261</td>
<td>1</td>
<td>FL 2nd semester Foreign Language 2</td>
<td>FL 1st semester Foreign Language 2</td>
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<td>FL 1st semester</td>
<td>Foreign Language 1</td>
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<td>4</td>
<td>GCAP (C8)</td>
<td>Gen Ed Capstone</td>
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**Total Semester Credit Hours** 14

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<tr>
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<th>Crs.</th>
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<th>Pre-Reqs</th>
<th>Crs.</th>
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<tr>
<td>CHM 32100</td>
<td>Analytical Chemistry I</td>
<td>1 year of organic chemistry</td>
<td>4</td>
<td>CHM 34200</td>
<td>Inorganic Chemistry</td>
<td>CHM 241; C: CHM 284</td>
<td>3</td>
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<tr>
<td>CHM 38300</td>
<td>Physical Chemistry</td>
<td>CHM 116, MA 261; PHYS 251</td>
<td>4</td>
<td>CHM 37600</td>
<td>Physical Chemistry Lab</td>
<td>CHM 384</td>
<td>2</td>
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<tr>
<td>MA 36300</td>
<td>Differential Equations</td>
<td>√</td>
<td>3</td>
<td>CHM 38400</td>
<td>Physical Chemistry</td>
<td>CHM 383</td>
<td>2</td>
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<tr>
<td>CHM 53300</td>
<td>Intro Biochemistry</td>
<td>CHM 256 or 262</td>
<td>3</td>
<td>CHM 42400</td>
<td>Analytical Chemistry II</td>
<td>CHM 321; P or C: CHM 383</td>
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<tr>
<td>CHM 49600</td>
<td>Senior Seminar I</td>
<td>CHM 280</td>
<td>0</td>
<td>CHM 34300</td>
<td>Inorganic Chemistry Lab</td>
<td>CHM 218; C: CHM 384</td>
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<td>2</td>
<td>CHM 49700</td>
<td>Senior Seminar II</td>
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<td>1</td>
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<tr>
<td>Elective</td>
<td>Free elective</td>
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<td>2</td>
<td>CHM Elective (300+ level)</td>
<td>Chemistry Elective (300-level or above)</td>
<td>V</td>
<td>3</td>
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**Total Semester Credit Hours** 16

**Summer Courses:**

- 120 credits required for Bachelor of Science degree
- 2.0 GPA required for Bachelor of Science degree/major

\[\checkmark = \text{See IPFW Bulletin or myBLUEprint for additional course prerequisites}\]