Associate of Arts Degree to BA in Physics

St. Charles Community College students who plan to transfer to Truman State University with the Associate of Arts degree are strongly encouraged to prepare for transfer by completing the courses listed below. By following this plan for degree completion, students are assured that they will be able to transfer without loss of credit or duplication of courses, that they will complete prerequisites for later course work, and that they will be prepared to make a smooth transition from St. Charles to Truman.

Students who complete the Associate of Arts degree will fulfill the Essential Skills, Modes of Inquiry, Truman Week, and Intercultural requirements of Truman’s Liberal Studies Program. Transfer students must fulfill all other degree requirements that are required of native Truman students.

Students who do not complete the courses as listed on this plan or who transfer without the Associate of Arts degree will have their coursework evaluated and applied to degree requirements on a course-by-course basis.

Students are recommended to complete the following courses to fulfill requirements for their Associate of Arts degree at St. Charles Community College:

### Communication – 9 credit hours

- **ENG 101** English Composition I
- **ENG 102** English Composition II
- **SPE 101** Oral Communication

### Social Science – 9 credit hours

Complete one course from Group I, and one course from Group II. Select the third course from Group I, II, or III. Students must fulfill the state statute requirements for the United States and Missouri Constitutions.

#### Group I

- **HIS 101** U.S. History to 1877
- **HIS 102** U.S. History Since 1877
- **HIS 115** U.S. History Since 1945 (elective at Truman but does fulfill MO Statute)
- **HIS 270** History of Missouri
- **POL 101** American Government
- **POL 102** State and Local Government

#### Group II

- **ANT xxx** Any ANT course
- **CRJ 140** Introduction to Criminal Justice System
- **ECO 100** Survey Economics
- **ECO 110** Principles of Macroeconomics
- **ECO 120** Principles of Microeconomics
- **GEO xxx** Any GEO course
- **PSY 101** Introduction to Psychology
- **SOC 101** Introduction to Sociology
SOC 102  Introduction to Sociological Theory

**Group III**
One additional course from Group I or II

**OR**

HIS xxx  Any HIS course
POL xxx  Any POL course

**Humanities – 9 credit hours**

**Complete one course from Group I, one course from Group II, and one additional course from Group I or Group II.**

**Group I**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ART 101</td>
<td>Art Appreciation</td>
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<tr>
<td>ART 150</td>
<td>Survey of Western Art History I: Prehistory to End of the Middle Ages</td>
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<tr>
<td>ART 151</td>
<td>Survey of Western Art History II: Renaissance to the Twentieth Century</td>
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<tr>
<td>ART 160</td>
<td>Art History II (formerly called Modern and Contemporary Art History)</td>
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<tr>
<td>ART 170</td>
<td>Design I</td>
</tr>
<tr>
<td>MUS 110</td>
<td>American Music Appreciation (elective but Fine Art Mode at Truman)</td>
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<tr>
<td>MUS 111</td>
<td>Music Appreciation</td>
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<tr>
<td>MUS 112</td>
<td>Jazz Appreciation</td>
</tr>
<tr>
<td>MUS 234</td>
<td>Jazz History</td>
</tr>
<tr>
<td>THE 122</td>
<td>Introduction to the Theater</td>
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**Group II**

Taking two courses in the same foreign language will apply toward the foreign language requirement for the Physics major.

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>FL xxx</td>
<td>Any FL course</td>
</tr>
<tr>
<td>LIT xxx</td>
<td>Any LIT course</td>
</tr>
<tr>
<td>PHL xxx</td>
<td>Any PHL course</td>
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**Multicultural/Valuing – 3 credit hours**

**Complete one course from the following:**
Taking the third course in the same foreign language as above will apply toward the intermediate foreign language requirement for the Physics major.

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<thead>
<tr>
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<tbody>
<tr>
<td>FL 101</td>
<td>Foreign Language and Culture I</td>
</tr>
<tr>
<td>FL 102</td>
<td>Foreign Language and Culture II</td>
</tr>
<tr>
<td>FL 201</td>
<td>Foreign Language and Culture III</td>
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<tr>
<td>FL 202</td>
<td>Foreign Language and Culture IV</td>
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**OR**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>ANT 102</td>
<td>Intro to Cultural Anthropology</td>
</tr>
<tr>
<td>ANT 151</td>
<td>World Archaeology</td>
</tr>
<tr>
<td>ANT 202</td>
<td>Current Debates in Anthropology</td>
</tr>
<tr>
<td>ESL 102</td>
<td>ESL: Intermediate Composition for Non-Native Speakers</td>
</tr>
<tr>
<td>GEO 100</td>
<td>Principles of Geography</td>
</tr>
<tr>
<td>HIS 145</td>
<td>Western Civilization, Ancient and Medieval Heritage</td>
</tr>
</tbody>
</table>
HIS 146  Western Civilizations, Modern European Heritage
LIT 200  World Mythology
LIT 271  Contemporary Voices of Global Literature
LIT 272  World Literature: Ancient World Through the Renaissance
LIT 273  World Literature: Enlightenment to the 20th Century
MUS 111  Music Appreciation
PHL 201  World Religion
POL 201  International Relations
POL 210  Comparative Politics
POL 255  European Politics and Culture

Mathematics – 5 credit hours

MAT 180  Calculus and Analytic Geometry I

Natural Science – 9 credit hours

Complete one course from Group I, and one course from Group II.
**Although only one lab is required for the AA degree, PHY 240/243 meets the major requirements at Truman and would be the recommended choice.

Group I
BIO 101/103  General Biology I and Lab
OR
BIO 150  General Biology I and Lab
BIO 105/106  Essentials of Biology and Lab
BIO 125/127  General Botany and Lab
BIO 160  General Botany and Lab

Group II
PHY 240/243  College Physics I and Lab

Computer Literacy Requirement – 3 credit hours

Complete one course from the following:
BAS 103  Microcomputer Applications
CPT 103  Microcomputer Applications
CPT 115  Introduction to Data Processing
EDU 220  Educational Technology

Capstone – 1 credit hour
COL 299  Sophomore Portfolio Assessment

Transferable Major Field Requirements – 19+ credit hours
From the following courses, choose courses to total 64 credits for the degree.

PHY 241/244  College Physics II and Lab
CHM 110/113  General Chemistry I and Lab
OR
CHM 115  General Chemistry I
MAT 230  Calculus and Analytic Geometry II
MAT 240  Calculus and Analytic Geometry III
MAT 250  Differential Equations

Total credits required for the Associate of Arts degree: 64

After completing the Associate of Arts degree at St Charles Community College, students will then complete the following courses at Truman State University to earn the Bachelor of Arts degree in Physics. Students may transfer any of the following 100-200 level equivalent coursework from SCC provided the 28 hours residency requirement, the 45 hours of Truman coursework, and the major hour requirements for Truman are met.

Junior Interdisciplinary Writing-Enhanced Seminar (JINS) – 3 credit hours

Bachelor of Arts Requirements – 0-6 credit hours

Bachelor of Arts Requirements
Complete the second year of a single foreign language, or demonstrate proficiency as determined by a proficiency examination, or successfully complete a higher-level foreign language course. Students who completed Language and Culture IV at SCC have fulfilled this requirement.

Required Support –23 credit hours (some of these courses may have been completed at SCC)

CHEM 130  Chemical Principles I (if not completed at SCC)
MATH 198  Analytic Geometry and Calculus I (if not completed at SCC)
MATH 263  Analytic Geometry & Calculus II (if not completed at SCC)
MATH 264  Analytic Geometry & Calculus III (if not completed at SCC)
MATH 365  Ordinary Differential Equations (if not completed at SCC)
STAT 290  Statistics

Major Requirements – 39 credit hours

PHYS 145  Physics Seminar
PHYS 250  Modern Physics I
PHYS 251  Modern Physics II
PHYS 275  Vibrations and Waves
PHYS 345  Junior Seminar
PHYS 382  Mathematical Physics
PHYS 388  Advanced Laboratory
PHYS 445  Advanced Physics Seminar
OR
PHYS 491  Senior Research II

Physics Electives – Choose at least 6 hours from the list below at least one must be PHYS 386, PHYS 482, or PHYS 486.
PHYS 320  Electronics
PHYS 380  Optics
PHYS 386  Classical Mechanics
PHYS 441  Physics Research I
PHYS 442  Physics Research II
PHYS 443  Physics Research III
PHYS 482  Electricity and Magnetism
PHYS 486  Thermodynamics and Statistical Mechanics
PHYS 490  Senior Research I

AND

PHYS 491  Senior Research II (this would be attributed to Major Requirements above)
PHYS 518  Advanced Topics (Topic)
PHYS 580  Quantum Mechanics

Learning Plan – 15 credit hours
The learning plan may be any existing minor (excluding Physics) or a second major of which at least 15 hours are not counted elsewhere or it may be a group of appropriate courses chosen by the student and his or her advisor. The initial learning plan and any subsequent changes must be approved by a committee consisting of the student’s advisor and two other physics faculty members (normally approved by the end of the sophomore year).

Writing-Enhanced Requirement
Complete at least two additional courses at Truman, in addition to the JINS course, that are listed as Writing-Enhanced. These courses may be used to fulfill other requirements.

Total credits required for the Baccalaureate of Arts degree: 120

Additional Information:
For those Physics majors who are pursuing the Master of Arts in Education degree, electives will include 7 credits in education. All Physics majors must score at or above the 20th percentile on the nationally-normed senior exam (MFAT).

Minimum GPA required: 2.00
Residency Requirements: For a Truman degree, at least 45 hours of credit must be completed in residence at Truman, including at least 15 hours of coursework in the major. In addition, the last 28 hours applied toward the degree must be completed in residence at Truman. Students must also complete at least 40 hours of 300+ level coursework.

SCC Contact: Student Development Office, 636-922-8241 or 8246
Truman Contact: Erin Shaw 660-785-5146, Kimberly Titus 660-785-4143, or Dr. Ian Lindevald, 660-785-4598
Location: Kirksville, Missouri