Building Momentum with Applied Degree Pathways

Despite significant enrollment in applied or technical associate degree programs, statewide associate-to-bachelor’s transfer initiatives tend to overlook these programs due to a number of challenges associated with their transfer. This session will share how Ohio is tackling these challenges through statewide faculty collaboration to develop applied degree pathways. Participants will learn about the importance of these efforts as well as ideas for how they might improve applied degree transfer for their institution or state.

Candice Grant, Senior Director, Ohio Guaranteed Transfer Pathways
Ohio Department of Higher Education
Building Momentum with Applied Degree Pathways

February 24, 2022
Candice Grant
Ohio Department of Higher Education
Not later than December 1, 2018, the chancellor shall update and implement the policies and procedures established pursuant to this section to ensure that any associate degree offered at a state institution of higher education may be transferred and applied to a bachelor degree program in an equivalent field at any other state institution of higher education without unnecessary duplication or institutional barriers. The policies and procedures shall ensure that each transferred associate degree applies to the student's degree objective in the same manner as equivalent coursework completed by the student at the receiving institution.
An Ohio Articulation Number is associated with each set of learning outcomes and serves as the connector between different institutions’ courses.
Associate degrees granted by Ohio public institutions fall in two broad categories:

Applied & Technical:
Associate of Applied Business (AAB); Associate of Applied Science (AAS); Associate of Technical Studies (ATS) & Associate of Information Technology (AIT)

Arts & Sciences
Associate of Arts (AA) & Associate of Science (AS)

https://www.ohiohighered.org/transfer/research
**Associate Degree Requirements**

**Applied Associate Degree**
- At least 15 semester hours of general education (Ohio Transfer 36 approved)
  - One course in English Composition (3 hours)
  - One course in Mathematics, Statistics, and Logic* (3 hours)
  - Six credit hours from two of the three categories:
    - Arts & Humanities
    - Social & Behavioral Sciences
    - Natural Sciences*
- Up to 15 semester hours of applied general education
- 30 semester hours of technical credits

**Associate of Arts or Associate of Science Degree**
- 36+ hours of Ohio Transfer 36 approved general education
- Other coursework up to 60-65 semester hours

*"However, recognizing that the skills needed for some [Ohio Transfer 36] courses in the mathematics and science areas exceed the skills needed for the successful completion of some applied degrees, [Ohio Transfer 36]-approved courses are not required to fulfill the mathematics and science requirements."

Progression from associate to baccalaureate degrees:
All associate degree recipients

All Associate Degrees
N: 14,861

Applied/Technical Degrees
N: 11,641 (77.8%)

Four-year enrollment:
2,575 (22.1%)

Graduation:
1,304 (50.8%)

Arts/Science Degrees:
N: 3,220 (22.2%)

Four-year enrollment:
1,569 (48.8%)

Graduation:
1,100 (70.1%)

Note: Four-year enrollment refers to attendance at Ohio public four-year main and regional campuses.
Applied Degree Pathways

**Finalized**
- Electrical Engineering Technology
- Mechanical Engineering Technology
- Applied Business
- Respiratory Therapy

**Under Development**
- Civil/Construction Engineering Technology
- Clinical/Medical Laboratory
- Criminal Justice
- Dietetics
- Early Childhood Education
- EMT/Paramedic
- Exercise Science/Pre-Health Professional
- Fire Science
- Health Information Management
- Human Services/Social Work
- Nursing
Model 1: Engineering Technology
Mechanical Engineering Technology Guaranteed Transfer Pathway

Statewide
Mechanical Engineering Technology
Associate of Applied Science
November 16, 2020

GENERAL EDUCATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition: Any OTM approved First Writing (TME001) course</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics, Statistics, and Logic: Pre-Calculus (TMM002) or College Algebra (TMM001) and Trigonometry (TMM003)</td>
<td>5-8</td>
</tr>
<tr>
<td>Arts &amp; Humanities: Any OTM approved Arts and Humanities course</td>
<td>3</td>
</tr>
<tr>
<td>Social &amp; Behavioral Sciences: Any OTM approved Social and Behavioral Sciences course</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences: Algebra-based Physics I (OSC014)</td>
<td>4-5</td>
</tr>
<tr>
<td>Natural Sciences: Algebra-based Physics II (OSC015) (preferred) or other OTM Natural Sciences course</td>
<td>4-5</td>
</tr>
<tr>
<td>English Composition &amp; Oral Communication: Public Speaking (OCC011), Oral Communication (TM02), Technical Writing, or Second Writing (TME002) course</td>
<td>3</td>
</tr>
<tr>
<td>General Education Electives: General Education Electives (if needed)</td>
<td>0-5</td>
</tr>
<tr>
<td>GENERAL EDUCATION TOTAL:</td>
<td>25-30</td>
</tr>
</tbody>
</table>

Advising Notes:
- Where it indicates “Any OTM approved,” students should work closely with their advisors.
- Calculus (TMM000) is recommended, either in fulfillment of the mathematics requirement or as an elective course, since certain bachelor degree programs prefer that Calculus be taken prior to transfer in order to allow students to complete the program most efficiently. However, there are also bachelor degree programs that will incorporate Calculus into the remaining coursework upon transfer. Students should work with their academic advisor and their intended receiving institution to determine the best program of study.

# Mechanical Engineering Technology

**Guaranteed Transfer Pathway**

**Statewide**

**Mechanical Engineering Technology**

**Associate of Applied Science**

**November 16, 2020**

<table>
<thead>
<tr>
<th>TECHNICAL, PRE-MAJOR, BEGINNING MAJOR</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course 1: Statics (CET007)</td>
<td>3</td>
</tr>
<tr>
<td>Course 2: Strength of Materials (CET008)</td>
<td>3</td>
</tr>
<tr>
<td>Course 3: Fluid Mechanics (CET009)</td>
<td>3</td>
</tr>
<tr>
<td>Course 4: Manufacturing Processes (CET010)</td>
<td>3</td>
</tr>
<tr>
<td>Course 5: CAD (CET012)</td>
<td>3</td>
</tr>
<tr>
<td>Course 6: Engineering Materials (CET013)</td>
<td>3</td>
</tr>
<tr>
<td>TECHNICAL, PRE-MAJOR, BEGINNING MAJOR TOTAL:</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDITIONAL COURSEWORK</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Electives (Recommended: Engineering Graphics (highly recommended), Programming Languages, Machine Design, and/or a second Manufacturing Processes course)</td>
<td>12-18</td>
</tr>
<tr>
<td>ADDITIONAL COURSEWORK TOTAL:</td>
<td>12-18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPLIED ASSOCIATE DEGREE</th>
<th>Total Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLIED ASSOCIATE DEGREE TOTAL:</td>
<td>60-65</td>
</tr>
</tbody>
</table>

**SPECIAL NOTES**

Some bachelor-degree granting programs may be competitive and admission into the program is not guaranteed. Students should check with individual institutions for their program admission requirements.

Bachelor-degree granting institutions may require additional general education courses since students will not complete the Ohio Transfer Module by following this pathway and will take these courses upon transfer.

Bachelor's Degree Completion

Course Equivalency Information

The following table outlines how transfer credits will be applied to the Bachelor of Science in Engineering Technology degree with a Mechanical/Systems concentration at Kent State University for students who completed an associate degree via the Ohio Guaranteed Engineering Technology Transfer Pathway. The OGETP designation guarantees the transfer and applicability of credits, but does not guarantee admission to a program. Some bachelor-degree granting programs may be competitive, and students should check with individual institutions for their program admission requirements.

<table>
<thead>
<tr>
<th>COURSE EQUIVALENCIES FROM THE ASSOCIATE DEGREE</th>
<th>Course Number</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL EDUCATION REQUIREMENTS/Ohio Transfer 36</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Ohio Transfer 36 approved First Writing (TME001) course</td>
<td>ENG 11011</td>
<td>3</td>
</tr>
<tr>
<td>Pre-calculus (TMM002) or College Algebra (TMM003) and Trigonometry (TMM002)</td>
<td>MATH 11010 and MATH 11022</td>
<td>6</td>
</tr>
<tr>
<td>Any Ohio Transfer 36 approved Arts and Humanities course</td>
<td>Ohio Transfer 36 Elective*</td>
<td>3</td>
</tr>
<tr>
<td>Any Ohio Transfer 36 approved Social and Behavioral Sciences course</td>
<td>Ohio Transfer 36 Elective*</td>
<td></td>
</tr>
<tr>
<td>Algebra-based Physics (OSC014)</td>
<td>PHY 13011 (PHY 13002)</td>
<td>3</td>
</tr>
<tr>
<td><strong>ADDITIONAL/APPLIED GENERAL EDUCATION REQUIREMENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algebra-based Physics [OSC015] (preferred) or other Ohio Transfer 36 Natural Sciences course</td>
<td>PHY 13021 (PHY 13002)</td>
<td>3</td>
</tr>
<tr>
<td>Public Speaking (COM013), Oral Communication (TMC0), Technical Writing, or Second Writing (TME002) course</td>
<td>COMN 1500, ENGR 21011, or Ohio Transfer 36 Elective*</td>
<td>3</td>
</tr>
<tr>
<td>General Education Elective*</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td><strong>PRE-MAJOR/BEGINNING MAJOR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statics (CET017)</td>
<td>MEBT 22005</td>
<td>3</td>
</tr>
<tr>
<td>Strength of Materials (CET018)</td>
<td>MEBT 22007</td>
<td>3</td>
</tr>
<tr>
<td>Fluid Mechanics (CET019)</td>
<td>MEBT 22012</td>
<td>3</td>
</tr>
<tr>
<td>Manufacturing Processes (CET010)</td>
<td>MEBT 12004</td>
<td>3</td>
</tr>
<tr>
<td>CAD (CET12)</td>
<td>MEBT 12001</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Materials (CET013)</td>
<td>MEBT 2205</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>Elective*</td>
<td>12-18</td>
</tr>
<tr>
<td><strong>TOTAL HOURS FROM ASSOCIATE DEGREE:</strong></td>
<td></td>
<td>60-65</td>
</tr>
</tbody>
</table>

*Indicates that coursework will be evaluated for applicability equivalency upon transfer at the university. If a Transfer Assurance Guide (TAG) course is taken, the approved course equivalency will be amended.

*The Kent Core requires students take two Social Sciences courses from two different curricular areas. If one Social Sciences course is completed, the second Social Sciences course must be completed elsewhere.

Bachelor’s Degree Completion

Remaining Coursework

<table>
<thead>
<tr>
<th>Remaining Coursework to Complete Bachelor’s Degree</th>
<th>Course Number</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Requirement: Technical Computing</td>
<td>EEFT 32003</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Engineering and Professional Ethics</td>
<td>EEFT 21610 or ENGR 31010</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Introduction to Technical Writing or Business Communications</td>
<td>ENGR 20002 or OTEC 26538</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Cultural Dynamics Technology (DUD) or Cooperative Education – Professional Development (ELD)</td>
<td>ENGR 31040 or ENGR 33090</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Materials Science and Technology</td>
<td>ENGR 33363</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Quality Techniques</td>
<td>ENGR 33703</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Project Management in Engineering and Technology</td>
<td>ENGR 38520</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Industrial and Environmental Safety</td>
<td>ENGR 43383</td>
<td>3</td>
</tr>
<tr>
<td>Major Requirement: Technical and Applied Studies Capstone (ELD)</td>
<td>TAS 47909</td>
<td>3</td>
</tr>
<tr>
<td>Additional Requirement: Introduction to Technical Writing or Business Communications</td>
<td>ENGR 20002 or OTEC 26538</td>
<td>3</td>
</tr>
<tr>
<td>Additional Requirement: Principles of Microeconomics (KSS)</td>
<td>ECON 22060</td>
<td>3</td>
</tr>
<tr>
<td>Additional Requirement: Intuitive Calculus (UMC)</td>
<td>MATH 11102</td>
<td>3</td>
</tr>
<tr>
<td>Additional Requirement: Project Management for Administrative Professionals</td>
<td>OT&amp;G 26626</td>
<td>1</td>
</tr>
<tr>
<td>Concentration Requirement: Machine Design or Facility Design and Material Handling</td>
<td>MIEET 32034 or ENGR 33079</td>
<td>3</td>
</tr>
<tr>
<td>Concentration Requirement: Advanced Manufacturing or Computer-Integrated Manufacturing</td>
<td>ENGR 39009 or ENGR 43709</td>
<td>3</td>
</tr>
<tr>
<td>Concentration Requirement: Mechanical/Systems Concentration Electives</td>
<td>Varies</td>
<td>9</td>
</tr>
<tr>
<td>Kent Core Requirement: Kent Core Composition 2 (KCP2) (if not already completed)</td>
<td>Varies</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Requirement: Kent Core Humanities (K-HUM)</td>
<td>Varies</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Requirement: Kent Core Fine Arts (KFA)</td>
<td>Varies</td>
<td>3</td>
</tr>
</tbody>
</table>

REMAINING COURSEWORK TO COMPLETE BACHELOR’S DEGREE TOTAL: 61

Advising Notes:
1 Students who have earned an associate degree will have 27 credits of technical coursework articulated to the bachelor’s degree program and will not have to take the electives for a minor or individualized specializations.
2 Students must successfully complete one domestic (DUD) and one global (DNG) course, of which one must be from the Kent Core. Students should consult with Kent State University advisor for more information.
3 Kent State requires a total of 120 credits hours for bachelor’s degree completion. The total number of hours to complete the bachelor’s degree represents a range of hours that may be needed depending on the individual course selections made during the associate degree program.

COMPLETE BACHELOR’S DEGREE

BACHELOR’S DEGREE TOTAL: 120
Model 2: Applied Business
So you’re interested in earning an associate degree in Business? There are two main types of degrees that you could earn. This flow chart will help you to consider which might better fit your academic and career goals. Also work with your academic advisor for help with your decision and to get additional information specific to your institution.

What do you want to do immediately after earning an associate degree in Business?

Enter the workforce

Pursue a bachelor’s degree in business

Undecided

Associate of Applied Business (AAB) or Associate of Applied Science (AAS)
See Page 2 for more information

Associate of Arts (AA) or Associate of Science (AS) degree in Business
See Page 3 for more information

Review pages 2-3 to learn more about both types of degrees, including academic and career considerations.
Still unsure? See page 4 for suggestions for undecided students.
Guide for Undecided Students

Undecided Students

If you are interested in business, but are undecided between an applied associate degree and an associate of art or science degree, ask your advisor to help you select courses that will count toward both types of associate degrees. Below is a list of courses that are typically required for both types of business degrees, but your advisor should be able to provide suggestions specific to your college. Taking courses that count toward both types of degrees will give you time to research which path is the best fit for you. In addition to your academic advisor, you can talk with mentors, employers, and family to help you explore your options and decide on a degree program. Students will need to decide on their degree program, at the latest, by the time they complete approximately 30 credit hours (which is about 10 courses).

General Education/OTM Courses:
- First Writing (TME001)
- Microeconomics (OSS004)
- Second Writing (TME002) or Public Speaking (OCM013) or Oral Communication
- Ohio Transfer Module (OTM) Electives

Business TAG Courses:
- Introduction to Financial Accounting (OBU010)
- Introduction to Managerial Accounting (OBU011)
- Legal Environment of Business (OBU004)
- Management and Organizational Behavior (OBU012)
- Principles of Marketing (OBU006)
- Business Communications (OBU005)
- Business Statistics (OBU013)
# Miami University

## Bachelor of Science in Commerce

The BS in Commerce offers three majors: Small Business Management, Digital Commerce, and Sales Management. The Small Business Management major lets you pursue an in-depth examination of small businesses built on a foundation of courses in traditional business areas such as accounting, management and marketing. The Sales Management major emphasizes personal selling, sales management and business-to-business marketing. The Digital Commerce major lays the foundation for graduates to develop marketing campaigns through digital channels and understand marketing metrics to adjust campaigns.

### Important Transfer Information:

If students enter with an associate degree in business or with the Ohio Transfer Module completed, they are guaranteed to be able to graduate in approximately 60 additional credit hours.

### Program Website:


### Contact Information:

| Ted Light | [lighttb@miamioh.edu](mailto:lighttb@miamioh.edu) |

### Delivery Method(s):

- Online
- Hybrid
- Traditional day classes on campus
- Evening classes on campus
Model 3: Nursing
This transfer pathway is between Ohio’s public institutions of higher education. It would only apply for transfer students from public institutions of higher education who have an active Registered Nurse (RN) license. Bachelor of Science in Nursing (BSN) programs may be competitive and admission into the program is not guaranteed. Students should check with their intended receiving institution for program admission requirements.

Students who have earned their associate degree in nursing (ADN) from one of Ohio’s public community and technical colleges (or completion of equivalent program) can be assured that, at a minimum, the following credits will be awarded with successful completion of their program and upon admission to a BSN program at one of Ohio’s public universities.

**General Education/Ohio Transfer 36**

*Direct Course Equivalency Transfer*

- First Writing (Ohio Transfer 36 approved) – 3 hours
- Mathematics (Ohio Transfer 36 approved) – 3-4 hours
- General Psychology or lifespan development (Ohio Transfer 36 approved) – 3 hours
- Anatomy & Physiology I & II with lab – 8-10 hours

*Credit toward general requirements*

- Equivalent of 6 semester credit hours of Ohio Transfer 36 Natural Sciences, including one lab, for integrated curricular content (e.g., chemistry, microbiology), or specific Ohio Transfer 36 course equivalency credit if standalone Ohio Transfer 36 Natural Sciences courses were taken

Total: 23-26

**Nursing Technical Coursework**

- Students should receive at least 30 hours of credit counting toward the Nursing major. Institutions may choose to award additional credit.

Total: at least 30 hours
Challenges

- Differing general education/college specific requirements
- Mathematics
- Similar sounding program names/not compatible coursework
- New paradigms
Opportunities

- New paradigms
- Expansion of the Ohio’s statewide guaranteed course equivalency system and further integration
- Mathematics Alignment work via the Ohio Mathematics Initiative
- Education via the Ohio Guaranteed Transfer Pathways
- Industry-Recognized Credentials Transfer Assurance Guides (ITAGs)
Questions?

Candice Grant
Ohio Department of Higher Education
cgrant@highered.ohio.gov

Please remember to complete the Session Evaluation for 2377--Building Momentum with Applied Degree Pathways