

INDUSTRIAL & SYSTEMS ENGINEERING (60 Credits)**Guided Pathway: Associate of Arts****Concentration: Industrial & Systems Engineering (FULL TIME).**For more information, visit www.fgc.edu and your academic advisor.

Meta-major: Industry/Manufacturing and Construction

University Transfer: **UF**

The *Associate of Arts* degree is a collegiate degree program consisting of lower-division courses intended for transfer to baccalaureate programs at the universities listed aboveⁱⁱ. This plan is for those who are interested in earning a baccalaureate degree in *Industrial & Systems Engineering*.

This is the sequence of courses for students interested in majoring in *Industrial & Systems Engineering* at one of the universities listed above. It does not represent a contract, nor does it guarantee course availability or entry into your university of choice. This pathway presents classes needed for your baccalaureate degree in *Industrial & Systems Engineering*. Courses that complete the degree are listed below. As always, visit your academic advisor each semester to help you keep on track for graduation.

Note: All AA degrees must satisfy the Foreign Language requirement for graduation. Please see catalog

**FULL-TIME
PATHWAY****SEMESTER BY SEMESTER MAP FOR FULL-TIME STUDENTS**

SEMESTER 1	ACTION ITEMS
ENC 1101 – Freshman Composition I ^{iv} (<i>Communication core</i>)	<ul style="list-style-type: none"> Meet with your advisor to confirm academic and career goals by the end of the semester. REQUIRED: Complete the <i>Computer Competency</i> course within Canvas. Signup for and pass the Florida Civic Literacy Exam. Consult your advisor to make sure you have met <i>the Foreign Language requirement</i>. At the end of the semester, begin research on college and universities where you want to seek to transfer. Meet with a career advisor/coach to research your career options with a degree in <i>Industrial & Systems Engineering</i>. Remember to start collecting artifacts from your courses for your Academic & Career Portfolio in SLS 2370 Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> You can start the FAFSA in October for the next academic year. (<i>i.e., in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024</i>)
<p>Choose one: AMH 2020 – US History from 1865 OR POS 1041 – American Government ^{iv} (<i>Social Science & civic literacy</i>)</p>	
MAC 1105 – College Algebra (<i>Mathematics core</i>)	
CHM 2045/L – General Chemistry I/Lab (<i>Physical Science</i>) (4 cr)	
TOTAL SEMESTER CREDIT HOURS: 13	
SEMESTER 2	ACTION ITEMS
<p>Choose one: ENC 1102 – Freshman Composition II OR CRW 2001 – Creative Writing OR ENC 1141 – Writing about Literature ^{iv} (<i>Communication</i>)</p>	<ul style="list-style-type: none"> Meet with your advisor to confirm or update your academic/career pathway and program of study. Ask about transfer advising to discuss options to pursue the bachelor's degree. Continue collecting artifacts from courses for your Academic & Career Portfolio in SLS 2370
MAC 1140 – Precalculus ^{iv} (<i>Mathematics core</i>)	
MAC 1114 - Trigonometry ^{iv} (<i>Elective Prerequisite</i>)	
<p>Choose one: MUL 1010 – Music Appreciation OR THE 2000 – Theatre Appreciation OR ARH 1000 – Art Appreciation OR HUM 2020 – Introduction to Humanities ^{iv} (<i>Humanities core</i>)</p>	
<p>Choose one: BSC 1005 – Biological Principles for Non-Majors OR Any general education BOT or BSC course (<i>Biological Sci Core</i>) (3-4 cr)</p>	
TOTAL SEMESTER CREDIT HOURS: 15-16	

SEMESTER 3	ACTION ITEMS
<p>MAC 2311 – Calculus I ^{iv} (<i>Elective Prerequisite</i>) (4 cr)</p>	<ul style="list-style-type: none"> • Meet with your advisor to confirm or update your academic/career pathway and program of study. • Ask about transfer advising to discuss options to pursue the bachelor's degree. • Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> ○ You can start the FAFSA in October for the next academic year. (<i>i.e., in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024</i>) • Check with your advisor for important deadlines and dates • Continue collecting artifacts from courses for your Academic & Career Portfolio in SLS 2370
<p>Choose one: PSY 2012 – General Psychology OR SYG 1000 – Introduction to Sociology OR SYG 2300 – Introduction to Social Psychology OR Any DEP or ECO course (<i>Social Science</i>)</p>	
<p>Choose one: SPC 2608 – Public Speaking OR SPC 1017 – Oral Communications OR SPC 1061 – Introduction to Academic and Professional Speaking^{iv} (<i>Communications</i>)</p>	
TOTAL SEMESTER CREDIT HOURS: 10	
SEMESTER 4	ACTION ITEMS
<p>SLS 2370 – Personal Academic & Career Engagement ^{iv} (3rd Soc Sci)</p>	<ul style="list-style-type: none"> • Begin applying to your top choice universities. • Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> ○ You can start the FAFSA in October for the next academic year. (<i>i.e., in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024</i>) • Check with your advisor for important deadlines and dates
<p>Choose one: LIT 2000 – Introduction to Literature OR Any general education AML, ENL, LIT, PHI or REL courses (<i>Humanities</i>)^{iv}</p>	
<p>PHY 2048 – General Physics with Calculus I (<i>Elective Prerequisite</i>) (5 cr)</p>	
<p>MAC 2312 – Calculus II ^{iv} (<i>Elective Prerequisite</i>) (4 cr)</p>	
TOTAL SEMESTER CREDIT HOURS: 15	
SEMESTER 5	ACTION ITEMS
<p>MAC 2313 – Calculus III ^{iv v} (<i>Elective Prerequisite</i>) (4 cr)</p>	<ul style="list-style-type: none"> • After reviewing your final program of study, apply for Graduation. <ul style="list-style-type: none"> ○ Meet with your advisor to apply for the degree. ○ Sign up for commencement. • Request final transcripts to be sent to the college or university to where you will transfer. • Congratulations, graduate!
<p>MAP 2302 – Elementary Differential Equations ^{iv v} (<i>Elective Prerequisite</i>)</p>	
<p>PHY 2049 – General Physics with Calculus II (<i>Elective Prerequisite</i>) (5 cr)</p>	
TOTAL SEMESTER CREDIT HOURS: 12	
AAIS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS PATHWAY TOTAL: 65-66 CREDIT HOURS	

ⁱ Degree plans may change in later catalogs. You may use this pathway if you entered the college on or before this date.

ⁱⁱ Students must earn at least 25% of the credit hours (15 hours) required for graduation through instruction by FGC to award the degree.

ⁱⁱⁱ This is not an official degree plan. For official degree requirements, [click here](#).

^{iv} You must earn a grade of "C" or better in all Gordon Rule classes.

^v This course is only offered in the spring term.

INDUSTRIAL & SYSTEMS ENGINEERING (60 Credits)**Guided Pathway: Associate of Arts****Concentration: Industrial & Systems Engineering (PART TIME).**For more information, visit www.fgc.edu and your academic advisor.

Meta-major: Industry/Manufacturing and Construction

University Transfer: UF

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This is the sequence of courses for students interested in majoring in *Industrial & Systems Engineering* at one of the universities listed above. It does not represent a contract, nor does it guarantee course availability or entry into your university of choice. This pathway presents classes needed for your baccalaureate degree in *Industrial & Systems Engineering*. Courses that complete the degree are listed below. As always, visit your academic advisor each semester to help you keep on track for graduation.

Note: All AA degrees must satisfy the Foreign Language requirement for graduation. Please see catalog**PART-TIME
PATHWAY****SEMESTER BY SEMESTER MAP FOR PART-TIME STUDENTS**

SEMESTER 1	ACTION ITEMS
ENC 1101 – Freshman Composition I ^{iv} (<i>Communication core</i>)	<ul style="list-style-type: none"> Meet with your advisor to confirm academic and career goals by the end of the semester. REQUIRED: Complete the <i>Computer Competency course</i> within Canvas. Consult your advisor to make sure you have met <i>the Foreign Language requirement</i>. Remember to start collecting artifacts from your courses for your Academic & Career Portfolio in SLS 2370 Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> You can start the FAFSA in October for the next academic year. (<i>i.e.</i>, in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024)
MAC 1105 – College Algebra ^{iv} (<i>Mathematics core</i>)	
TOTAL SEMESTER CREDIT HOURS: 6	
SEMESTER 2	ACTION ITEMS
Choose one: ENC 1102 – Freshman Composition II OR CRW 2001 – Creative Writing OR ENC 1141 – Writing about Literature ^{iv} (<i>Communication</i>)	<ul style="list-style-type: none"> At the end of the semester, begin research on college and universities where you want to seek to transfer. Meet with a career advisor/coach to research your career options with a degree in <i>Industrial & Systems Engineering</i>. Continue collecting artifacts from courses for your Academic & Career Portfolio in SLS 2370
MAC 1140 – Precalculus ^{iv} (<i>Mathematics core</i>)	
Choose one: BSC 1005 – Biological Principles for Non-Majors OR Any general education BOT or BSC course (<i>Biological Science Core</i>) (3-4 cr)	
TOTAL SEMESTER CREDIT HOURS: 9-10	
SEMESTER 3	ACTION ITEMS
MAC 1114 - Trigonometry ^{iv} (<i>Mathematics core</i>)	<ul style="list-style-type: none"> Meet with your advisor to confirm or update your academic/career pathway and program of study. Signup for and pass the Florida Civic Literacy Exam. Continue collecting artifacts from courses for your Academic & Career Portfolio in SLS 2370 Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> You can start the FAFSA in October for the next academic year. (<i>i.e.</i>, in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024)
Choose one: AMH 2020 – US History from 1865 OR POS 1041 – American Government ^{iv} (<i>Social Science & civic literacy</i>)	
Choose one: MUL 1010 – Music Appreciation OR THE 2000 – Theatre Appreciation OR ARH 1000 – Art Appreciation OR HUM 2020 – Introduction to Humanities ^{iv} (<i>Humanities core</i>)	
TOTAL SEMESTER CREDIT HOURS: 9	
SEMESTER 4	ACTION ITEMS
MAC 2311 – Calculus I ^{iv} (<i>Elective Prerequisite</i>) (4 cr)	<ul style="list-style-type: none"> Meet with your advisor and ask about transfer advising to discuss options to pursue the bachelor's degree. Continue collecting artifacts from courses for your Academic & Career Portfolio in SLS 2370
CHM 2045/L – General Chemistry I/Lab (<i>Physical Science</i>) (4 cr)	
TOTAL SEMESTER CREDIT HOURS: 8	

SEMESTER 5	ACTION ITEMS
<p>MAC 2312 – Calculus II ^{iv} (<i>Elective Prerequisite</i>) (4 cr)</p>	<ul style="list-style-type: none"> • Meet with your advisor to confirm academic and career goals by the end of the semester. • Meet with a career advisor/coach to research your career options. • Continue collecting artifacts from your courses for your Academic & Career Portfolio in SLS 2370. • Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> ○ You can start the FAFSA in October for the next academic year. (<i>i.e., in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024</i>)
<p>Choose one: SPC 2608 – Public Speaking OR SPC 1017 – Oral Communications OR SPC 1061 – Introduction to Academic and Professional Speaking^{iv} (<i>Communications</i>)</p>	
TOTAL SEMESTER CREDIT HOURS: 7	
SEMESTER 6	ACTION ITEMS
<p>PHY 2048C – General Physics with Calculus I (<i>Elective Prerequisite</i>) (5 cr)</p>	<ul style="list-style-type: none"> • Meet with your advisor to confirm or update your academic/career pathway and program of study.
<p>SLS 2370 – Personal Academic & Career Engagement ^{iv} (<i>3rd Soc Sci</i>)</p>	
TOTAL SEMESTER CREDIT HOURS: 8	
SEMESTER 7	ACTION ITEMS
<p>Choose one: LIT 2000 – Introduction to Literature OR Any general education AML, ENL, LIT, PHI or REL courses (<i>Humanities</i>) ^{iv}</p>	<ul style="list-style-type: none"> • Begin applying to your top choice universities. • Begin applying for Financial Aid and Scholarships <ul style="list-style-type: none"> ○ You can start the FAFSA in October for the next academic year. (<i>i.e., in October 2023, you can complete the FAFSA for if you plan to register for classes at a college or university Fall 2024</i>) • Check with your advisor for important deadlines and dates
<p>PHY 2049C – General Physics with Calculus II (<i>Elective Prerequisite</i>) (5 cr)</p>	
TOTAL SEMESTER CREDIT HOURS: 8	
SEMESTER 8	ACTION ITEMS
<p>Choose one: PSY 2012 – General Psychology OR SYG 1000 – Introduction to Sociology OR SYG 2300 – Introduction to Social Psychology OR Any DEP or ECO course (<i>Social Science</i>)</p>	<ul style="list-style-type: none"> • After reviewing your final program of study, apply for Graduation. <ul style="list-style-type: none"> ○ Meet with your advisor to apply for your degree. ○ Sign up for commencement. • Request final transcripts to be sent to the college or university to where you will transfer. • Congratulations, graduate!
<p>MAC 2313 – Calculus III ^{iv v} (<i>Elective Prerequisite</i>) (4 cr)</p>	
<p>MAP 2302 – Elementary Differential Equations ^{iv v} (<i>Elective Prerequisite</i>)</p>	
TOTAL SEMESTER CREDIT HOURS: 10	
AAIS DEGREE MINIMUM: 60 SEMESTER CREDIT HOURS PATHWAY TOTAL: 65-66 CREDIT HOURS	

ⁱ Degree plans may change in later catalogs. You may use this pathway if you entered the college on or before this date.

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^v This course is only offered in the spring term.