

GATE

Gifted and Talented Education
MICHIGAN STATE UNIVERSITY

2020-2021
PROGRAM GUIDE



Apply online at
gifted.msu.edu

Dear Parents and Students,

The GATE office is excited to announce that we have a new program beginning in fall 2020, M.A.N.G.A. – Japanese. In addition, we are offering the GUPPY program for second grade students during the weekend of June 26-28, 2020. Summer programs have rolling admissions, so complete your application early!

GATE academic year programs remain the same, serving students in grades 7-10. CHAMP (Math), ISHALL (English), and ALL (Latin) are offered on the MSU campus and CHAMP (Math), ISHALL (English), and M.A.N.G.A. (Japanese) will be available at satellite locations in Southeast Michigan.

The advanced curriculum of all programs is developed with gifted students in mind. GATE students will engage with topics and concepts that are several years advanced for their current grade level while building on skills and concepts they may have learned in previous GATE programs.

The application deadline for all programs is May 7, 2020. We encourage you to apply early to ensure you have all materials submitted by the deadline.

Please reference the Application Guideline charts (page 9 for Academic Year Programs and page 31 for Summer Programs) based on your student's current grade level to see where your student fits.

Academic Year Information Meeting

Sunday, February 9, 2020

11:00 am – 2:00 pm

MSU Business College

Summer Information Meeting

Sunday, March 22, 2020

12:00 pm – 2:00 pm

MSU Business College

Southeast Michigan Information Meeting

Wednesday, March 25, 2020

6:00 pm – 8:00 pm

MSU Novi Tollgate Education Conference Center

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IN MEMORIAM

Dorothy Lawshe

**We are sad to announce the passing of
original GATE director, Dorothy Lawshe.**

Dorothy passed away in May of 2019 and was the posthumous recipient of the Michigan Association for Gifted Children's inaugural Lifetime Achievement Award in October 2019. Former GATE director Jenny McCampbell accepted the award on behalf of Dorothy's family.

Dorothy won MSU's Crystal Apple Education award and also established the Cooperative Highly Accelerated Mathematics Program (CHAMP) and Math, Science, and Technology (MST@MSU) Program, both of which are still in existence today.

Dorothy will be greatly missed, and it is our hope that past and future GATE participants and families know of her impact within the gifted community and the selflessness with which she served gifted children.

Dorothy's family has asked that donations in her memory be made to the Dorothy Lawshe Endowment in recognition of the impact Dorothy has had on the lives of Michigan children over the past several decades.

The Dorothy Lawshe Endowment for Gifted and Talented Education

The generosity of contributions to the Dorothy Lawshe Endowment fund ensures that gifted and talented students continue to enjoy excellent, enhanced, educational opportunities for years to come by funding GATE's need-based scholarships, which are granted to high-ability students who would otherwise not have access to programming.

Please donate to help support GATE and gifted students in Michigan.

Online donations can be made by visiting: **givingto.msu.edu/gift/?sid=1320**




OGRE
GOGATE

The background is a vibrant green collage of various white icons representing different fields of study. At the top, there are icons for mathematics (pi, infinity, numbers, geometric shapes), science (telescope, microscope, DNA helix, globe), technology (laptop, smartphone, circuit board), and general education (books, graduation cap, lightbulb). The bottom half features a large, faint map of Michigan, with icons for history and art (classical statues, lyres, scrolls) overlaid on it.

About Gifted and Talented Education

At Michigan State University

Gifted and Talented Education or GATE is a division of University Outreach and Engagement at Michigan State University. The GATE office is dedicated to promoting differentiated educational programs for students in middle school and high school. The mission of the Gifted and Talented Education office is to provide educational experiences that allow gifted students to develop intellectually, to cultivate social relationships, and to expand their understanding of the world.

About Academic Year Programs

Space is limited in academic year programs and the application process is competitive.

Our academic year programs challenge gifted middle and high school students in math, literature, and language. These programs are designed to replace high school curricula, allowing students to complete four years of Michigan High School Content Expectations (HSCE) and Common Core National Standards in just two years of study. (Exception: M.A.N.G.A. is a three-year course.) Courses are taught by MSU instructors. Students are expected to stay with the program for the full program cycle. After completion, students are prepared to take advanced placement (AP) courses at their high school or dual enroll through MSU or another institution.

Eligibility varies by program but is generally determined by ACT or SAT scores and other requirements.

Academic year programs include:

Cooperative Highly Accelerated Mathematics Program (CHAMP – Mathematics)

Current application grades for CHAMP are students in grades 6–9. CHAMP is offered in East Lansing and Southeast Michigan. The CHAMP program begins with Algebra 1.

Intensive Studies in Humanities, Arts, Language, and Literature (ISHALL – English)

Current application grades for ISHALL are students in grades 6–10. ISHALL is offered in East Lansing and Southeast Michigan. The ISHALL program begins with grade 9 English curriculum.

Amo Linguam Latinam (ALL – Latin)

Current application grades for ALL are students in grades 6–10. ALL is offered in East Lansing as a hybrid class. ALL begins with year 1 Latin curriculum.

Michigan's Accelerated NihonGo for Americans (M.A.N.G.A. – Japanese)

Current application grades for M.A.N.G.A. are students in grades 6–9. M.A.N.G.A. is offered in Southeast Michigan. M.A.N.G.A. is a hybrid class with mostly in person curriculum, as well as online meetings. M.A.N.G.A. begins with year 1 Japanese curriculum. **PLEASE NOTE: This is a 3-year program.**

About Summer Programs

Summer programs have rolling admissions and fill up quickly! Apply early!

GATE summer programs offer students the chance to experience advanced coursework and the college campus alongside their high achieving peers. Programs include a residential option for grades 7 and above (age 12 and above), as well as a commuter option for all programs.

Summer programs include:

Gifted University for Parents and Precocious Youth (GUPPY)

GUPPY offers a variety of exploratory educational presentations and hands-on experiences in Michigan State University's laboratories and classrooms. There are several advanced topic "tracks" for students to choose from, each with their own combination of STEAM-based classes.

Intensive Studies for Gifted and Talented (IS4GT)

IS4GT is a one-week advanced residential or commuter program in a specific concentrated curriculum for students in grades 6-11.

Math, Science, and Technology (MST@MSU)

A one-week residential or commuter program for students in grades 7-8. MST classes and workshops are offered in a wide range of topics such as: computer science, chemistry, physiology, and more. Students will take two classes plus one workshop.

Math, Science, Technology, and Leadership (MSTL)

A two-week residential or commuter program for students in grades 9-10. This program offers advanced topics such as molecular biology and number theory. Students will choose two STEM courses, as well as one Leadership Workshop. Leadership workshops are designed to introduce students to concepts and skills required to be a leader.

How do I Apply?

All programs require these four things:

- Above grade level testing
- A teacher recommendation
- Your most recent report card
- **\$50 non-refundable application fee**

Getting Started

Visit **gateway.gifted.msu.edu**. There you will complete (or update, if you're a returning applicant) a student profile. Once that's done, you can apply!

1. Complete your testing early! Testing information can be found at **gifted.msu.edu**. Each program page has an "Eligibility" page with minimum accepted tests and scores for applying. If you have an above-level test that is not listed, please email **gifted@msu.edu** to see if we will consider it.
2. Upload your testing and report card to your application.
3. You will be asked for your teacher's email address within your application. Once submitted, your teacher will receive a link to complete the recommendation form. External letters or recommendations are not accepted.
4. **Pay your \$50 non-refundable application fee at gifted.msu.edu/payment**
If you're requesting financial aid, you can do so within the application.

Once all these steps are complete, GATE will review your application. For CHAMP and ISHALL applicants, a diagnostic test will also be administered to determine program readiness.

Testing Requirements

All programs require above grade-level testing such as SAT, ACT, CogAT, and NNAT. For more information, visit **gifted.msu.edu**

The following charts show minimum test scores required to apply for GATE programs for grades 2 and up.

Only 1 qualifying score per test is required to meet minimum application requirements. For example, a CHAMP applicant needs an ACT score of at least 21 in Math OR a 23 Composite to apply.

Note: Score requirements are a minimum benchmark.
Testing alone does not guarantee your student's acceptance.

Test Scores Accepted for The GUPPY Program (Grades 2-6)

Program	PSAT 8/9 Math	PSAT 8/9 Reading	NNAT	IOWA	NWEA	MSTEP	CogAT
GUPPY 2	X	X	90th percentile	90th percentile	95th percentile	Level 4	90th percentile
GUPPY 3-4	410	410	90th percentile	90th percentile	95th percentile	Level 4	90th percentile
GUPPY 5-6	410	410	90th percentile	90th percentile	95th percentile	Level 4	90th percentile

Note: A full IQ score report is acceptable for all programs, in place of the tests listed above. For IQ testing information visit gifted.msu.edu.

If your scores come close to meeting the stated minimums, we encourage you to apply. The application review process is holistic and will take into consideration all aspects of your application.

Minimum Test Scores Required for GATE Academic Year Programs (Grades 7 and Up)

Program	ACT Math	ACT English	ACT Reading	ACT Composite	SAT Math	SAT Evidence-Based Reading and Writing	SAT Total	CogAT**
CHAMP	21	++	++	23	560	++	1090	90th percentile (Quantitative)
ISHALL	X	21	22	X	X	560	X	90th percentile (Verbal or Non-Verbal)
ALL	X	20	20	X	X	520	1020	90th percentile (Composite)
M.A.N.G.A.	X	20	20	X	X	520	1020	90th percentile (Composite)

** CogAT scores must be in the 90th percentile in the indicated subtest. Retesting required after 3 years.

NOTE: CogAT scores are valid for Southeast Michigan locations only. CogAT scores are **NOT** accepted for East Lansing programming.

++No minimum score required, but student must exhibit a proficiency for reading and writing comprehension.

Minimum Test Scores Required for GATE Summer Programs (Grades 6 and Up)

Program	Grades	ACT Math	ACT English	ACT Reading	ACT Composite	SAT Math	SAT Evidence-Based Reading and Writing	SAT Total	CogAT **
MST@MSU	7-8	18	18	18	19	500	500	980	90th percentile
MSTL	9-10	19	19	20	20	510	510	1000	90th percentile
Intensive Study in Aqueous and Environmental Geochemistry	9-11	19	19	19	20	510	510	1000	90th percentile
Intensive Study in Algorithms and Artificial Intelligence	8-11	20	20	20	21	520	520	1020	90th percentile
Intensive Study in Aircraft Piloting	8-11	18	18	18	19	500	500	980	90th percentile
Intensive Study in Animation	6-9	18	18	18	19	500	500	980	90th percentile
Intensive Study in Mathematical Machine Learning	8-10	20	20	20	21	520	520	1020	90th percentile
Intensive Study in PRE-MED ED	7-9	19	19	19	20	510	510	1000	90th percentile
Intensive Study in Pre-Law: LitIGATE	8-11	19	19	19	20	510	510	1000	90th percentile
Intensive Study in Science Fiction and Fantasy Short Story Writing	7-11	19	19	19	20	510	510	1000	90th percentile
Intensive Study in Sustainable Agriculture and Remote Sensing	9-11	19	19	19	20	510	510	1000	90th percentile
Intensive Study in Technical Writing in GIS, Data Visualization	7-11	19	19	19	20	510	510	1000	90th percentile

** Retesting required after 3 years.

TESTING FOR GATE PROGRAMS

CogAT **Cognitive Abilities Test**

Only for summer programs and Southeast Michigan Academic Year Programs (administered by MSU GATE)

Test dates

At MSU: March 9, April 6, April 27, and May 7

Southeast Michigan: March 21, April 15, May 2, June 13

Cost: \$45 per person

Go to **gifted.msu.edu** to register and for testing locations.

IQ Testing

For application to GATE Programs, an IQ test is acceptable in place of an ACT or SAT test. The psychologists listed below provide IQ assessment, such as the WISC V test.

Pat LaPat

Clinical Psychologist

36516 Green Spring
Farmington Hills, MI 48311
Call 248-661-0195 for details

or

2190 N. Woodward
Bloomfield Hills, MI 48301
Call 248-661-0195 for details

Bright Pine

Dr. Katherine Lewitzke, PsyD, LP

Licensed Psychologist and Clinic Director
Call 248-383-8728 for details

MSU Psychological Clinic

316 Physics Rd., Rm 262
East Lansing, MI 48824
Call 517-355-9564 for details

University of Michigan

The University Center for the Child and Family

Call 734-764-9466 for details

Wayne State University

Psychology Clinic

60 Farnsworth St.
Detroit, MI 48202
Call 313-577-2840 for details

The cost varies based on the services requested and rendered. Please call provider to inquire about cost.

GATE does not recommend, guarantee, or take any responsibility or liability for the list of organizations above.





Academic Year Programs

Our academic year programs challenge gifted middle and high school students in math, literature, and language. Space is limited in academic year programs and the application process is competitive. Apply early!

Academic Year Application Guideline

If you are currently in the following grades during application time...

You can apply for the following Academic Year Programs:

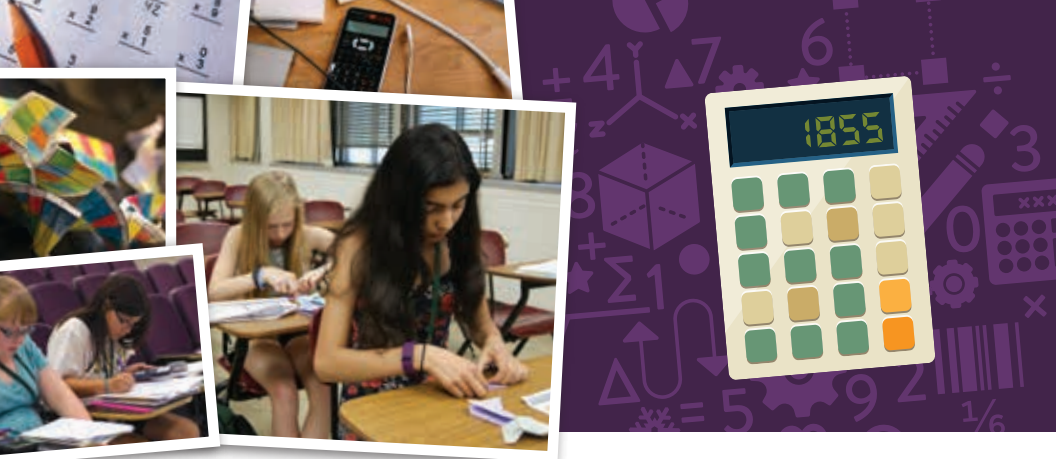
Grades 6-9

CHAMP, ISHALL, or M.A.N.G.A.

Grades 6-10

ALL

Note: students begin these programs in the Fall of their 7th, 8th, 9th, or 10th grade year. For example, to begin the program in the Fall of 7th grade, students must apply in the spring of their 6th grade year.



Cooperative Highly Accelerated Mathematics Program (CHAMP – Mathematics)

FALL 2020 – SPRING 2022

CHAMP, in partnership with the Department of Mathematics and University Outreach and Engagement at Michigan State University, provides classroom instruction for qualified mathematically gifted students applying in grades 6-9.

Important Dates for CHAMP Program

CHAMP at MSU

Application deadline: May 7, 2020

Information meeting: February 9, 2020

Classes held Thursdays

First day of class (tentative):

Thursday, August 27, 2020

1:00 – 3:30 pm

MSU campus – Room TBD

CHAMP – Southeast Michigan

Application deadline: August 10, 2020

Information meeting: March 25, 2020

Classes held Mondays

First day of class (tentative):

The first week after Labor Day

(Time TBD)

For more information, visit:

gifted.msu.edu/champ

For information including extended course descriptions, payment options, and testing information, please visit gifted.msu.edu. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

CHAMP is designed so that participating students will complete in two years the math content assigned in Michigan High School Content Expectations (HSCE) for all four years of high school and meet the Common Core National Standards. In their first year of CHAMP, students study Algebra 1 and Algebra 2. In the second year, CHAMP students study geometry and a standard pre-calculus course (trigonometry, analytic geometry, college algebra, and a brief introduction to calculus concepts).

Students must begin CHAMP with the study of Algebra 1. Bypassing one or more CHAMP courses is not allowed. Students completing CHAMP should be prepared to enroll in an honors high school calculus course, an advanced placement (AP) high school calculus course, or a college calculus course.

CHAMP Schedule

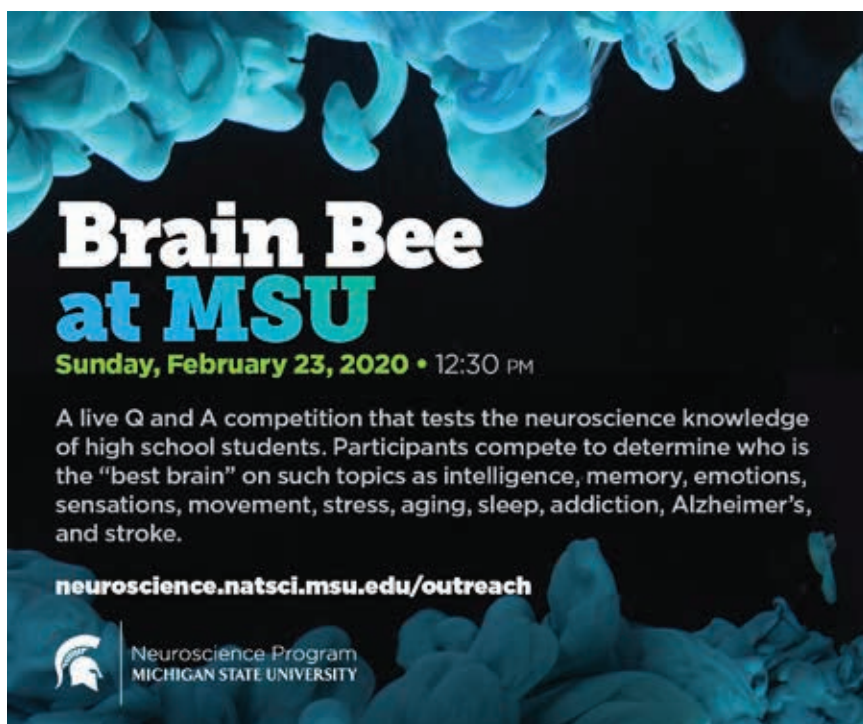
Schedule:	Course:
Semester 1 (Fall, Year 1)	Algebra 1
Semester 2 (Spring, Year 1)	Algebra 2
Semester 3 (Fall, Year 2)	Geometry
Semester 4 (Spring, Year 2)	Pre-Calculus

Instructional Plan

- Students attend one class per week at their program location.
- Each class lasts 2.5 hours.
- Traditional high school curriculum is taught at an accelerated pace, requiring the student to learn to be motivated and self-guided outside of the classroom to complete substantial homework and be a mature, independent learner.
- There are regularly scheduled CHAMP labs outside of school hours intended to strengthen a student's understanding of program materials and concepts and to seek additional help as needed from program tutors.
- Students will be given an MSU account for the online course website to access CHAMP coursework/homework which should be checked daily.

Student Evaluations

- Progress in mastering subject matter is monitored regularly through graded weekly homework assignments, quizzes, and tests.
- Parent-teacher conferences are scheduled mid-semester to give parents an opportunity to communicate in person with the teacher about their student's progress.
- Progress reports are made available to each student's family after fall and spring conferences.
- Grade reports are distributed to families and the student's school at the end of each semester.
 - Upon receipt of the grade report, your student's school should record the credit and grades on the student's high school transcript.
- Parents are welcome to contact the instructor at any time with questions or concerns.


The poster features a dark background with glowing blue, brain-like structures. The title "Brain Bee at MSU" is prominently displayed in white and blue. Below the title, the date and time "Sunday, February 23, 2020 • 12:30 PM" are written in green. A paragraph describes the event as a live Q and A competition testing neuroscience knowledge. The website "neuroscience.natsci.msu.edu/outreach" is listed in white. At the bottom left is the Michigan State University logo, and at the bottom right is the text "Neuroscience Program MICHIGAN STATE UNIVERSITY".

**Brain Bee
at MSU**

Sunday, February 23, 2020 • 12:30 PM

A live Q and A competition that tests the neuroscience knowledge of high school students. Participants compete to determine who is the "best brain" on such topics as intelligence, memory, emotions, sensations, movement, stress, aging, sleep, addiction, Alzheimer's, and stroke.

neuroscience.natsci.msu.edu/outreach

 **Neuroscience Program
MICHIGAN STATE UNIVERSITY**



Intensive Studies in Humanities, Arts, Language, and Literature

(ISHALL – English)

FALL 2020 – SPRING 2022

ISHALL, in partnership with the Department of English, the Department of Writing, Rhetoric, and American Cultures, and University Outreach and Engagement at Michigan State University, provides classroom instruction for qualified gifted language art students applying in grades 6-10.

Important Dates for ISHALL Program

ISHALL at MSU

Application deadline: May 7, 2020

Information meeting: February 9, 2020

Classes held Tuesdays

First day of class (tentative):

Tuesday, August 25, 2020

7:45 – 10:10 am

MSU campus – Room TBD

ISHALL – Southeast Michigan

Application deadline: August 10, 2020

Information meeting: March 25, 2020

Classes held Tuesdays

First day of class (tentative):

TBD

4:30 – 6:30 pm

For more information, visit:

gifted.msu.edu/ishall

For information including extended course descriptions, payment options, and testing information, please visit **gifted.msu.edu**. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

Because students are studying typical high school literature content, ISHALL curriculum may contain mature content that is not appropriate for all students. Parents need to review the sample curriculum available in the online ISHALL Program Handbook and determine if their student is ready for the ISHALL curriculum.

ISHALL is designed so that participating students will complete in two years the English content assigned in Michigan High School Content Expectations (HSCE) for all four years of high school as well as meet the Common Core National Standards.

Students must begin ISHALL with the Grade 9 English curriculum. Bypassing one or more courses is not allowed. Students completing ISHALL should be prepared to enroll in an honors high school English course, an advanced placement (AP) high school English course, or a college English or writing course.

ISHALL Schedule

Schedule:	Course:
Semester 1 (Fall, Year 1)	Grade 9 English curriculum
Semester 2 (Spring, Year 1)	Grade 10 English curriculum
Semester 3 (Fall, Year 2)	Grade 11 English curriculum
Semester 4 (Spring, Year 2)	Grade 12 English curriculum

Instructional Plan

- Students attend one class per week at their program location.
- Each class lasts 2.5 hours.
- Traditional high school curriculum is taught at an accelerated pace, requiring the student to learn to be motivated and self-guided outside of the classroom to complete substantial homework and be a mature, independent learner.
- There are regularly scheduled ISHALL labs outside of school hours intended to strengthen a student's understanding of program materials and concepts and to seek additional help as needed from program tutors.
- Students will be given an MSU account for the online course website to access ISHALL coursework/homework which should be checked daily.

Student Evaluations

- Progress in mastering subject matter is monitored regularly through graded weekly homework assignments, quizzes, and tests.
- Parent-teacher conferences are scheduled mid-semester to give parents an opportunity to communicate in person with the teacher about their student's progress.
- Progress reports are made available to each student's family after fall and spring conferences.
- Grade reports are distributed to families and the student's school at the end of each semester.
 - Upon receipt of the grade report, your student's school should record the credit and grades on the student's high school transcript.
- Parents are welcome to contact the instructor at any time with questions or concerns.





Amo Linguam Latinam (ALL – Latin)

FALL 2020 – SPRING 2022

ALL, in partnership with the Department of Writing, Rhetoric, and American Cultures, and University Outreach and Engagement at Michigan State University, provides classroom instruction for qualified gifted world language students applying in grades 6-10.

Important Dates for ALL Program

ALL at MSU

Application deadline: May 7, 2020

Information meeting: February 9, 2020

Classes held in person on 1st and 3rd Tuesday; 2nd and 4th Tuesday held live via online video (Zoom)

First day of class (tentative):

Thursday, August 27, 2020

4:00 pm – 6:00 pm

MSU Campus –Room TBD

For more information, visit:

gifted.msu.edu/all

For information including extended course descriptions, payment options, and testing information, please visit gifted.msu.edu. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

ALL is designed so that the participating students can complete in two years the Latin language content assigned in Michigan High School Content Expectations (HSCE) for all four years of high school as well as meet the Common Core National Standards. Every semester of the GATE Latin program corresponds to one year of high school Latin.

Students must begin ALL with the Grade 9 Latin curriculum. Bypassing one or more courses is not allowed. Students completing ALL will be prepared to take the advanced placement (AP) Latin exam, or a college Latin course.

ALL Schedule

Schedule:	Course:
Semester 1 (Fall, Year 1)	Latin 1
Semester 2 (Spring, Year 1)	Latin 2
Semester 3 (Fall, Year 2)	Latin 3
Semester 4 (Spring, Year 2)	Latin 4

Instructional Plan

- Students attend one class per week at their program location.
- Each class lasts 2 hours.
- Traditional high school curriculum is taught at an accelerated pace, requiring the student to learn to be motivated and self-guided outside of the classroom to complete substantial homework.
- There are regularly scheduled ALL labs outside of school hours intended to strengthen a student's understanding of program materials and concepts and to provide additional help as needed from program tutors.
- Students will be given an MSU account for the online course website to access ALL coursework/homework which should be checked by parents regularly.

Student Evaluations

- Progress in mastering subject matter is monitored regularly through graded weekly homework assignments, quizzes, and tests.

- Parent-teacher conferences are scheduled mid-semester to give parents an opportunity to communicate in person with the teacher about their student's progress.
- Progress reports are made available to each student's family after fall and spring conferences.
- Grade reports are distributed to families and the student's school at the end of each semester.
 - Upon receipt of the grade report, your student's school should record the credit and grades on the student's high school transcript.
- Parents are welcome to contact the instructor at any time with questions or concerns.



**Neuroscience
Fair at MSU**

Saturday, April 13, 2020 • 12 - 4 PM

Explore cool neuroscience activities including learning how our senses can be tricked, playing brain games, and even touching a real human brain! Experience neuroscience firsthand at this free event with fun activities for all ages.

neuroscience.natsci.msu.edu/outreach

 **Neuroscience Program
MICHIGAN STATE UNIVERSITY**



NEW!

Michigan's Accelerated NihonGo for Americans

(M.A.N.G.A. – Japanese)

FALL 2020 – SPRING 2023

M.A.N.G.A., in partnership with the Office of University Outreach and Engagement at Michigan State University, provides classroom instruction for qualified gifted students applying in grades 6-9.

Important Dates for M.A.N.G.A. Program

M.A.N.G.A. – Southeast Michigan

Application deadline: August 10, 2020

Information meeting: March 25, 2020

Classes held Thursdays

First day of class (tentative):

The first week after Labor Day

(Time TBD)

Southeast Michigan

For more information, visit:

gifted.msu.edu/manga

For information including extended course descriptions, payment options, and testing information, please visit **gifted.msu.edu**. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

M.A.N.G.A. is designed so that participating students can complete in three years the Japanese language content assigned in the Michigan High School Content Expectations (HSCE) for all four years of high school as well as meet the Common Core National Standards. Semesters 5-6 correspond to a high school AP Japanese course.

Students must begin M.A.N.G.A. with the Japanese 1 curriculum. Bypassing one or more courses is not allowed. Students completing M.A.N.G.A. should be prepared to take the Japanese Language and Culture advanced placement (AP) exam, or a college Japanese course.

M.A.N.G.A. Schedule

Schedule:	Course:
Semester 1 (Fall, Year 1)	Japanese 1
Semester 2 (Spring, Year 1)	Japanese 2
Semester 3 (Fall, Year 2)	Japanese 3
Semester 4 (Spring, Year 2)	Japanese 4
Semester 5 (Fall, Year 3)	AP Japanese Prep
Semester 6 (Spring, Year 3)	AP Japanese Prep

Instructional Plan

- Students attend one class per week at their program location.
- Each class lasts 2.5 hours.
- Traditional high school curriculum is taught at an accelerated pace, requiring the student to learn to be motivated and self-guided outside of the classroom to complete substantial homework.
- There are regularly scheduled M.A.N.G.A. labs outside of school hours intended to strengthen a student's understanding of program materials and concepts and to seek additional help as needed from program tutors.
- Students will be given an MSU account for the online course website to access M.A.N.G.A. coursework/homework which should be checked daily.

Student Evaluations

- Progress in mastering subject matter is monitored regularly through graded weekly homework assignments, quizzes, and tests.
- Parent-teacher conferences are scheduled mid-semester to give parents an opportunity to communicate in person with the teacher about their student's progress.
- Progress reports are made available to each student's family after fall and spring conferences.
- Grade reports are distributed to families and the student's school at the end of each semester.
 - Upon receipt of the grade report, your student's school should record the credit and grades on the student's high school transcript.
- Parents are welcome to contact the instructor at any time with questions or concerns.





Langue pour Étudiants Avancés de Français (LEAF – French)

LEAF, in partnership with the Department of Romance and Classical Languages and University Outreach and Engagement at Michigan State University, provides classroom instruction change for students applying in grades 6-10 who have advanced skills in language arts/French.

LEAF is on hiatus for Fall 2020. Please check back in January 2021 for the LEAF program starting Fall 2021-Spring 2023.

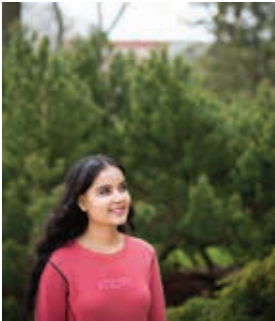
For more information, visit:

gifted.msu.edu/leaf

For information including extended course descriptions, payment options, and testing information, please visit **gifted.msu.edu**. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu



Pioneer



Innovate



Engage

MICHIGAN STATE
UNIVERSITY

Honors College

honorscollege.msu.edu

Academic Year Program Details

Responsibilities of Participants

Students

- Attend classes regularly
- Complete assigned homework regularly
- Keep parent(s)/guardian(s) informed of weekly graded homework and quizzes
- Attend labs as desired or assigned
- Exhibit appropriate classroom behavior
- Maintain satisfactory level of performance in regular school course work
- Log in daily to online class website

Parents/Guardians

- Transport student to and from class
- Attend an orientation session and mid-semester conferences
- Support and encourage the student
- Review weekly graded homework and quizzes with the student
- Communicate any problems to the instructor
- Provide student with access to a computer, a printer, and internet access
- Contact and work with school officials to facilitate credit transfer and individual learning plans

Local School District

- Release students to attend class at designated location during their school day where applicable
- Agree that these classes will be accepted in lieu of in-school required subject classes

- Recognize this course of study and record credits and grades on high school transcripts
 - Grant high school credit for demonstrated mastery of content (up to four years of the subject)
 - Identify a local district contact person for the program
-

What to Expect From Your GATE Program

GATE programs are designed to provide educational experiences that allow gifted students to develop intellectually, to cultivate social relationships, and to expand their understanding of the world.

Academic Integrity

GATE programs adhere to Michigan State University expectations about academic integrity.

Academic integrity is honest and responsible scholarship. Students are expected to submit original work and give credit to other people's ideas. Maintaining academic integrity involves:

- Creating and expressing your own ideas in course work
- Acknowledging all sources of information
- Completing assignments independently or acknowledging collaboration
- Accurately reporting results when conducting your own research or with respect to labs
- Honesty during examinations

Academic integrity is the foundation of university success. Learning how to express original ideas, cite sources, work independently, and report results accurately and honestly are skills that carry students beyond their academic career. Academic dishonesty not only cheats the student of valuable learning experiences, but can result in a failing grade on assignments, a failing grade in a course, or even expulsion from the university for the student.

Lessons and Class Structure

The instructor prepares lessons that provide students with a conceptual-theoretical framework for the content of the course. Practical examples are discussed to assist student understanding and work toward developing mastery of a particular skill or concept. New material is introduced at a pace much faster than occurs in the usual classroom. Gifted students typically require this pace in order to remain challenged.

An example of class structure may include the instructor reviewing unresolved homework assignments, introducing new material, giving spot quizzes and longer tests, and assigning homework that considers both previously studied material and concepts just introduced. Homework assignments, taking the average student six to eight hours to complete, are collected at the beginning of each class. This homework is graded, commented on by the professor or an assistant, and returned to and discussed with the student before the end of that day's class or the next class.

Experience suggests that some students begin a program expecting to be able to work through homework quickly, and they can become frustrated when they are unsure of what to do immediately. Through the process of adjusting to the program students will learn perseverance with mental tasks. Other students tend to view any effort that is less than 100% correct as a failure. As the course proceeds, these students develop a more mature perspective on learning. Homework helps to solidify concepts presented in class and to provide a realistic challenge, requiring students to develop problem-solving skills and to persevere in the face of less-than-instant-success. Students may feel overwhelmed at first by the volume of the homework assigned, but most adjust to what is required.

Because of the accelerated and demanding nature of the Academic Year programs, students will only be allowed to begin one Academic Year program per year. Students are welcome to apply to more than one Academic Year program—if accepted to multiple programs, they can choose which one they would like to enroll in for the upcoming year, and then reapply for another program the following year. However, please note that each application requires a non-refundable \$50 application fee.

Costs and Payment

These fees apply to:

CHAMP (all locations), **ISHALL** (all locations), **ALL**, and **M.A.N.G.A.**.

Application fees

A non-refundable \$50 application fee is required for each program.

Please note that this fee must be paid **BEFORE** any information is shared or reviewed on your application.

Tuition

Tuition is \$1,500 per year

- \$750 is due within 7 days of program billing to confirm attendance.
 - \$750 is due within 14 days of program billing. Please refer to acceptance letter for due dates. Failure to pay tuition by the due dates will result in immediate withdraw from the program. No refunds will be given.
 - Please note that tuition payments are non-refundable.
 - Students accepted within 14 days of the program start will be subject to an abbreviated payment deadline.
-

Financial aid

Tuition assistance from the GATE office may be available to those with financial need. Fill out the Financial Aid page of the application when you apply. Parents should also contact their student's school to learn if any financial support is provided by the school. Financial aid recipients qualify to have any textbooks and field trips covered by the GATE office.

School tuition process

Many school districts in and around GATE program areas contribute all or part of a student's tuition. Upon acceptance, you will receive a form for your student's school to complete which includes billing information. This form must be completed and returned to the GATE office within 14 days of receipt. At that time, you will be responsible for any tuition that the school will not pay upon receipt.

NOTE: If your student's school has paid all or part of their tuition, you are responsible for reimbursing them directly if your student leaves the program for any reason.

How to pay

Payments can be made online at **gifted.msu.edu/payment**.

Please contact the GATE office for check submission instructions.

Other costs

Parents are responsible for providing transportation, as well as textbooks, classroom supplies and a TI-83+ calculator for CHAMP students. Some programs may organize optional field trips with attendance costs to be paid by the family.

Cancellation policy

All classes are subject to a minimum enrollment of 20 students and may be canceled at the discretion of the GATE office. Your application fee and any paid tuition will be refunded.

Refunds

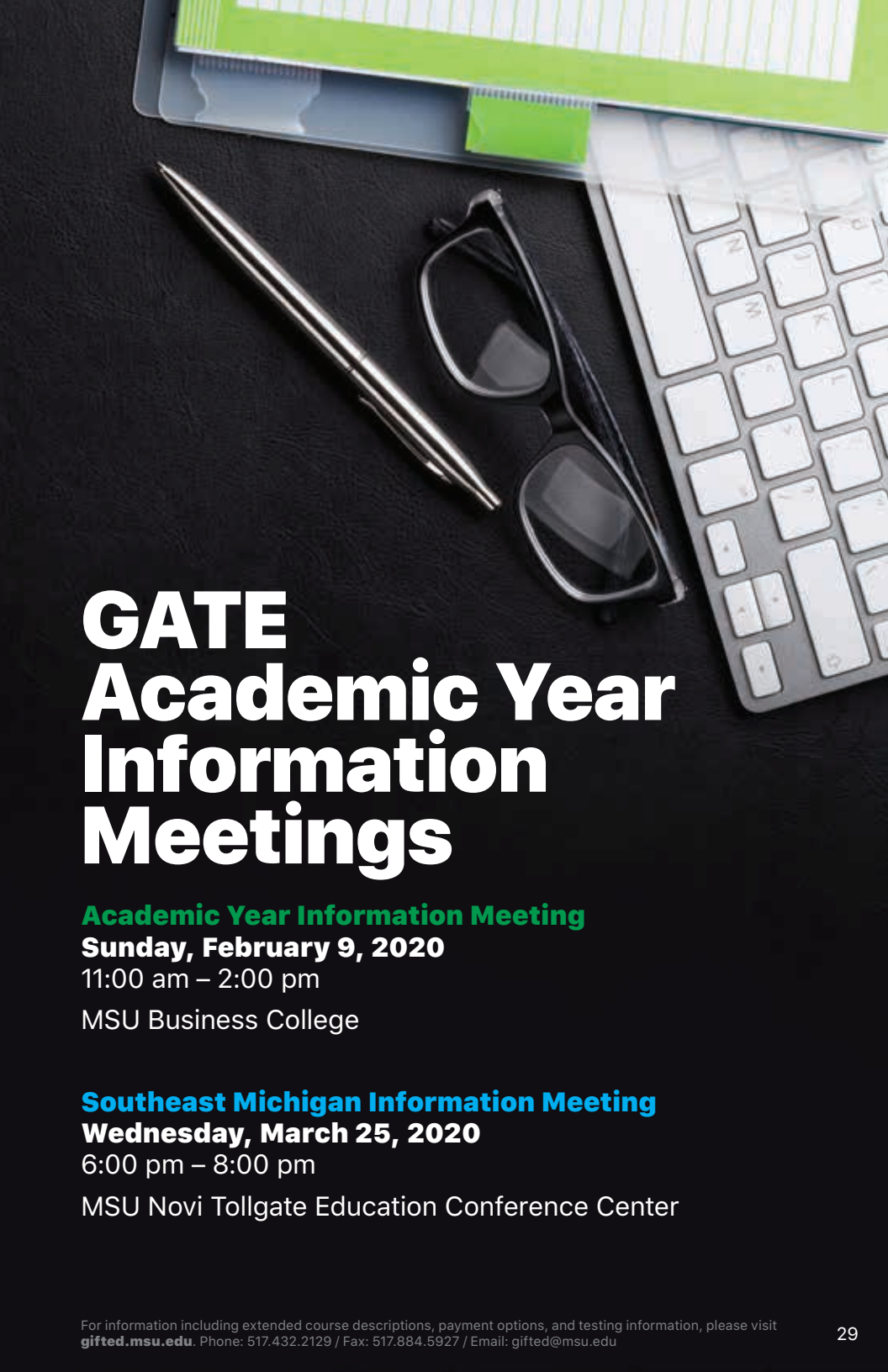
No fees or tuition will be refunded unless the GATE office cancels the program.

Drops

All requests for withdrawals must be submitted in writing to the Gifted and Talented Education office via e-mail at **gifted@msu.edu**.

No fees or tuition will be refunded.





GATE Academic Year Information Meetings

Academic Year Information Meeting

Sunday, February 9, 2020

11:00 am – 2:00 pm

MSU Business College

Southeast Michigan Information Meeting

Wednesday, March 25, 2020

6:00 pm – 8:00 pm

MSU Novi Tollgate Education Conference Center



Summer Programs

GATE summer programs offer students the chance to experience advanced non-credit coursework and the college campus alongside their high achieving peers. Summer program applications are reviewed on a rolling basis and classes fill up quickly. Apply early!

Summer Programs Application Guideline

If you are currently in...	...you can apply for the following Summer Programs:
Grades 2	GUPPY 2
Grades 3 or 4	GUPPY 3-4
Grades 5 or 6	GUPPY 5-6; Intensive Studies: Animation: A Digital Artistry Experience (6th grade only)
Grades 7	MST@MSU; Intensive Studies: PRE-MED ED • Animation: A Digital Artistry Experience • Science Fiction and Fantasy Short Story Writing • Technical Writing in GIS, Data Visualization, and Immersive Displays
Grade 8	MST@MSU; Intensive Studies: PRE-MED ED • Aircraft Piloting • Animation: A Digital Artistry Experience • Mathematical Machine Learning • Algorithms and Artificial Intelligence • Science Fiction and Fantasy Short Story Writing • Technical Writing in GIS, Data Visualization, and Immersive Displays • PRE-LAW: LitiGATE
Grade 9	MSTL; Intensive Studies: Animation: A Digital Artistry Experience • Mathematical Machine Learning • Algorithms and Artificial Intelligence • Aircraft Piloting • PRE-MED ED • Science Fiction and Fantasy Short Story Writing • Technical Writing in GIS, Data Visualization, and Immersive Displays • PRE-LAW: LitiGATE • Sustainable Agriculture and Remote Sensing
Grade 10	MSTL; Intensive Studies: Aircraft Piloting • Mathematical Machine Learning • Algorithms and Artificial Intelligence • Science Fiction and Fantasy Short Story Writing • Technical Writing in GIS, Data Visualization, and Immersive Displays • PRE-LAW: LitiGATE • Aqueous and Environmental Geochemistry • Sustainable Agriculture and Remote Sensing
Grade 11	Intensive Studies: Aircraft Piloting • Algorithms and Artificial Intelligence • Science Fiction and Fantasy Short Story Writing • Technical Writing in GIS, Data Visualization, and Immersive Displays • PRE-LAW: LitiGATE • Aqueous and Environmental Geochemistry • Sustainable Agriculture and Remote Sensing



GATE Summer Programs Information Meeting

Sunday, March 22, 2020

12:00 pm – 2:00 pm

MSU Business College



Gifted University for Parents and Precocious Youth (GUPPY)

GUPPY is a weekend program offering students in grades 2-6 a variety of accelerated exploratory educational presentations and hands-on experiences in Michigan State University's laboratories and classrooms.

Important Dates for GUPPY Program

..... GUPPY

Application deadline: May 7, 2020

GUPPY 2 - NEW!

June 26– 28, 2020

GUPPY 3-4

June 19-21, 2020

June 26-28, 2020

July 20-24, 2020 (NEW! Half day, week long)

July 24-26, 2020

GUPPY 5-6

June 19-21, 2020

June 26-28, 2020

July 20-24, 2020 (NEW! Half day, week long)

July 24-26, 2020

..... Parent University

NEW – Multiple Sessions!

June 21, 2020

12:30pm – 3:30pm

June 28, 2020

12:30pm – 3:30pm

July 24, 2020

9:00am – 12:00pm

For more information, visit:

gifted.msu.edu/guppy

For information including extended course descriptions, payment options, and testing information, please visit **gifted.msu.edu**. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

GUPPY is designed for young gifted and talented students to attend classes taught by MSU faculty and subject experts at Michigan State University for the weekend. This GATE program will offer young gifted students a variety of accelerated exploratory educational presentations and hands-on experiences in MSU's laboratories and classrooms.

Commuting

Local families commute daily by dropping off and picking up their student each day from campus.

Lodging options

Visiting families may stay overnight locally at a special MSU rate or make reservations on their own with another hotel of their choice. Families are responsible for the cost of their hotel stay.

GUPPY's Parent University

Parents, save the date! You are invited to attend GUPPY's Parent University, which provides informational presentations conducted by gifted experts. Parent University occurs on **June 21, June 28, and July 24**. Various topics related to gifted education and raising a gifted child will be discussed. Past topics include: Gifted 101, Roadmap to Advocacy, IQ Testing, and Spatial Learners. There will also be an Ask the Gifted Expert Q&A session where the speakers will answer parent questions. All GUPPY parents are welcome to attend any and all Parent U sessions.

GUPPY 2 Track Options

Students in Grade 2 will take the classes in the track below. Space is limited and students are accepted on a first-come first-served basis.

For full descriptions, see gifted.msu.edu/guppy

GUPPY 2: June 26-28, 2020 – NEW!

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
E	Coding Connections: Build and Expand Coding Skills Using Spheros and Robots	Night at the Art Museum	Lunch and Coordinated Activity Time	Learning Math From Zero to Infinity	Coordinate Graphing: Creating Pictures Using Mathematics

GUPPY 3-4 Track Options

Students in Grades 3-4 will take the classes in one of the tracks below.

Space is limited, and each track will be filled on a first-come first-served basis.

For full descriptions, see gifted.msu.edu/guppy

GUPPY 3-4: June 19-21, 2020

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
A	Mathematical Mysteries: Quick and Clever Problem Solving	Theatre Arts: Dancing, Singing, and Acting!	Lunch and Coordinated Activity Time	Coding Game Design with JavaScript Programming Including Hello World	The Natural Beauty of Art
B	Space as a New Frontier in Art	3D Mathematics		The Magic of Milk Science: Sweet Eats and Treats of Milk	Geocaching: The High-Tech Treasure Hunt

GUPPY 3-4: June 26-28, 2020

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
F	Math is Everywhere: Patterns in Nature and Applying Mathematical Design to Art	Reverse Engineering: Take Apart and Look Inside Technologies and Appliances and Explore Their Creations	Lunch and Coordinated Activity Time	Neuroscience: What's the Big Deal About the Brain?	Backstage Pass: TV, Radio, and Sports Arena

GUPPY 3-4: July 20-24, 2020

Track	Class 1 8:30 – 9:30 am	Class 2 9:45 – 10:45 am	Class 3 11:00 am – 12:00 pm
H	Math Olympiad Jr.: Math Problem Solving Contests	World of Art and Design	The Biology and Life Cycle of Plants
I	Your Life as Art, but ANIMATED	3-D Printing: Design, Model, and Print	Electricity and Electronics

GUPPY 3-4: July 24-26, 2020

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
L	Fibonacci Sequence: Understanding the Sequence and the Sum to Develop the Logic	"Lego" of Your Poetry Fears: Writing Poetry is as Easy as Building Legos!	Lunch and Coordinated Activity Time	Survivor! Survivor! Basic skills for Wilderness Survival	Candy and it's Chemistry: Chocolate, Pop Rocks & Candy Conflagration
M	Who Dunnit? Reading Critically to Solve a Mystery.	Brain Benders: Puzzles and Games to Challenge Your Mind		Chemistry: Acidic and Basic Chemical Reactions	Science Olympiad Exploration

GUPPY 5-6 Track Options

Students in Grades 5-6 will take the classes in one of the tracks below.

Space is limited, and each track will be filled on a first-come first-served basis.

For full descriptions, see gifted.msu.edu/guppy

GUPPY 5-6: June 19-21, 2020

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
C	Nuclear Astrophysics: Fusion, Fragmentation, and Radioactive Decay	Wilderness: Survival Skills in the Great Outdoors	Lunch and Coordinated Activity Time	Real World Algebra: Algebra + Problems= Real World Connections	Introduction to Python Programming Language Using Minecraft
D	Engineering: Spatial Reasoning and the Design Cycle	Advanced Coding Game Design with JavaScript Programming Including Hello World		A Mythical Journey in Art	Brain Training with Area Mazes: Simple Math and Clever Logic

GUPPY 5-6: June 26-28, 2020

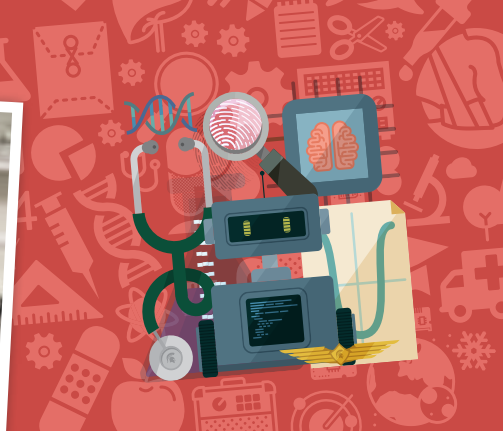
Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
G	Science Olympiad: Prepare to Compete in One of the Premier Science Competitions	Ham Radio: Learn the Amateur Bands to Talk across Town, around the World, or Even into Space	Lunch and Coordinated Activity Time	Green Screen on the Scene: Take your Digital Story Just About Anywhere	Computer Programming: Java and Python Scripting

GUPPY 5-6: July 20-24, 2020

Track	Class 1 8:30 – 9:30 am	Class 2 9:45 – 10:45 am	Class 3 11:00 am – 12:00 pm
J	Forensic Science Jr. Forensic Science Jr.: Love a good mystery? Learn How Science Helps You Solve It.	Anatomy and Physiology: Exploration of the Human Body	Art's Abstract Side of Life
K	Biology of Animal Behavior and Response	Force and Physics=Fun	Fashion Institute: From Designers to Creations, We Love Fashion from the 70's!

GUPPY 5-6: July 24-26, 2020

Track	Class 1 8:30 – 9:45 am	Class 2 10:05 – 11:20 am		Class 3 12:45 – 2:00 pm	Class 4 2:20 – 3:35 pm
N	The Culture of Art	Pilot and Airplane Exploration: From Alpha to Zulu, is Becoming a Pilot for You?	Lunch and Coordinated Activity Time	Watch out Percy Jackson! Learn to write Narratives like a Demi-God!	Computer Programming: Java and Python Scripting
O	Pre Med Jr.	Pre Med Jr.		Pre Med Jr.	Pre Med Jr.



Intensive Studies for Gifted and Talented (IS4GT)

A one-week advanced program in a specific concentrated curriculum for gifted, IS4GT is an option for 6th-11th grade students. Classes focus on one main topic for the week.

Important Dates for IS4GT Program

IS4GT

Application deadline: May 7, 2020

IS4GT Program Dates

June 21-26, 2020

- PRE-LAW: LitiGATE, An Intensive Study in Prosecuting and Defending A Criminal Case
- Mathematical Machine Learning
- Aircraft Piloting
- Science Fiction and Fantasy Short Story Writing

July 5-10, 2020

- PRE-MED ED
- Algorithms and Artificial Intelligence
- Aqueous and Environmental Geochemistry

July 19-24, 2020

- Animation: A Digital Artistry Experience
- Technical Writing in GIS, Data Visualization and Immersive Displays
- Sustainable Agriculture and Remote Sensing

For more information, including course descriptions, visit:

gifted.msu.edu/is4gt

For information including extended course descriptions, payment options, and testing information, please visit **gifted.msu.edu**. Phone: 517.432.2129 / Fax: 517.884.5927 / Email: gifted@msu.edu

IS4GT Course Offerings for **June 21-26, 2020**

Please Note: Listed grades are the grades that students are in when they are applying.

PRE-LAW: LitiGATE, An Intensive Study in Prosecuting and Defending A Criminal Case

Grades 8-11

- Partnership with Western Michigan's Cooley Law School
- Students will learn to read a case file, a criminal statute, and a criminal complaint.
- Students will create a case theme, observe skills necessary for opening statements and closing arguments, effective techniques for direct and cross-examination and proper methods for introducing items into evidence.
- After observing the tutorials, students will practice what they have learned by performing collaborative and interactive exercises designed to prepare for participating in a mock trial. Instructors will provide feedback and constructive critiques to help prepare the students for their final mock trial.

Mathematical Machine Learning

Grades 8-10

- Covers key mathematical concepts that underpin modern machine learning
- Will serve as a tutorial to newcomers that have no background in calculus, linear algebra, or probability theory
- Introduces relevant mathematical concepts needed to understand machine learning methods, with a minimum of prerequisites

Aircraft Piloting

Grades 8-11

- Flight lesson in a Diamond DA20 aircraft
- Learn about aircraft systems, weather, the U.S. air traffic control system, airport environments and federal aviation regulations

Science Fiction and Fantasy Short Story Writing

Grades 7-11

- Learn to examine, analyze, and investigate short sample texts
- Focus on the intensive creation of your own short fiction in this genre

IS4GT Course Offerings for
July 5-10, 2020

Please Note: Listed grades are the grades that students are in when they are applying.

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PRE-MED ED

Grades 7-9

- Program intended for students interested in the health care field
- Discover medical specialties through hands-on demonstrations and activities, such as a medical escape room, phlebotomy, and intubation
- Learn Physiology to see how the body functions

.....

Algorithms and Artificial Intelligence

Grades 8-11

- Modeling individual decisions; defining decision; deciding what to decide
- Analyzing a single option: identifying factors; identifying relationships; building connections; and scoring the option
- Comparing options; selecting an option; testing the algorithm; summarizing the decision process
- Changing a decision; monitoring a decision: time frames and the hybrid approach

.....

Aqueous and Environmental Geochemistry

Grades 9-11

- Use a variety of state-of-the-art equipment for collecting in situ river and groundwater data
- Collect water samples for hands on wet chemistry analysis in MSU's geochemistry laboratory.
- Create computer models of these complex environmental systems using the data we collected in the field and laboratory.

IS4GT Course Offerings for
July 19-24, 2020

Please Note: Listed grades are the grades that students are in when they are applying.

Animation: A Digital Artistry Experience

Grades 6-9

- Use motion capture to create realistic, complex movement
- Learn basic rigging for 3D characters and creatures
- Observe motion and weight and translate those observations to animation

**Technical Writing in GIS,
Data Visualization, and Immersive Displays**

Grades 7-11

- Analyze spatial location and organizes layers of information into visualizations using maps and 3D scenes
- Make maps that communicate, perform analysis, share information, and solve complex problems around the world

Sustainable Agriculture and Remote Sensing

Grades 9-11

- Learn about the fast moving and high-tech field of modern agriculture directly from industry leaders and contemporary research experts.
- Participate the analysis of high-resolution satellite images and explore the advances in air and space-borne platforms in obtaining crop and soil data.
- Tour the MSU research farms and launch a state-of-the-art research drone to collect our own data for analysis.
- Learn about the future of farming including topics such as sustainable agriculture, food security, crop yield forecasting, and precision farming.
- Assessing the impact of climate variability and change on agricultural production systems.



Math, Science, and Technology (MST@MSU)

University is a one-week summer commuter or residential program for academically talented students who are currently in grade 7 or 8 during the 2019-2020 school year. To sign up for the residential option, students must be a minimum age of 12 years old.

NOTE: MST/MSTL class and workshop choices are subject to change or cancellation at the discretion of the GATE office. Such changes **DO NOT** warrant refunds or withdrawals.

We cannot guarantee placement in any of the classes or workshops offered.

Important Dates for MST Program

MST

Application deadline: May 7, 2020

Program Dates: July 12-17, 2020

July 12, 2020

1:00 – 2:30 pm
Check-in at residential hall

3:00 – 4:00 pm
Orientation for parents and students (including commuter)

July 13-17, 2020

Classes held Monday – Friday
9:00 am – 5:00 pm

Lunch included for all students (including commuter)
Extended day is available for commuter students at an additional cost.

July 17, 2020 (Friday)

Around 5:00 pm
Check-out and Closing Ceremony (all students and parents)

For more information, including course descriptions, visit:

gifted.msu.edu/mst

The program is held at the MSU campus and offers a variety of topics within mathematics, science, and technology, focusing real-world applications in these areas. The goal is to match the intellectual abilities of talented students with rigorous and challenging course work, which provides enrichment but does not duplicate or accelerate course work that is part of the regular middle school curriculum. Students will participate in two classes and one workshop. See descriptions on the following pages. Students will be asked to rank their preference of topics.

MST Class Options (Students will receive 2)

Chemistry: Exploring our Atomic World

- Build a working wet cell battery
- Use liquid nitrogen to flash freeze "Dippin' Dots"
- Use electrolysis to chemically separate water into hydrogen gas and oxygen gas
- Participate in "hands-on" laboratory activities

Math Olympiad

- Develop strategies to solve common math problems typically found in local, regional and national contests
- Learn to appreciate the art of mathematical problem-solving while strengthening the ability to employ problem-solving strategies
- Be exposed to mathematical concepts that might not otherwise be encountered in the public schools
- Math topics covered: Exponents and Logarithms, Complex Numbers, Linear Equations, Proportions, Number Theory, Quadratic Equations, Special Factorizations and Clever Manipulations, Circles, and Angles

Raspberry Pi

- Unbox and setup a new Raspberry Pi 4 model B
- Install and explore an Integrated Development Environment (Visual Studio Code)
- Learn to use GitHub for code version control (functional email address required)
- Create a web application in the Java programming language
- Create scripts in the Python programming language
- Use Python to manipulate the world in Minecraft

Nuclear Astrophysics

- A tour of NSCL's rare isotope research areas
- Latest research in nuclear astrophysics
- The origins of the elements – Big Bang nucleosynthesis, stellar fusion, explosive capture processes
- Careers in research science (or, "people will pay you to learn things")

Anatomy and Physiology: An exploration of the human body

- Examine real organs
- Monitor vital signs
- Perform an EKG
- Test your lung function

Media Creation in the Digital Age World

- Go through the ins and outs of media creation starting with the basics and working up to professional level
- Creating content that leads and bringing a perspective that stands out from what everyone else is doing
- Create content to tell a story for a purpose

Water, Water Everywhere...or is it?

- Learn history of water use from ancient times to present
- Explore what really is in water
- Analyze samples of water quality and composition

MST Workshop Options (Students will receive 1)

Fun with Physics

- Learn about the amazing noises the high-voltage sparks emitted by Tesla coil produce
- Learn about both linear and circular polarization of light
- Learn about a wide range of topics related to vibrations and waves from sunsets to musical instruments

Archery and Air Rifle

- Learn the fundamentals and drills to increase confidence and proficiency
- Introduced to the recurve bow, compound bow, and crossbow
- For air rifle, students will learn bench-rest position, practice shooting fundamentals, confirm zero, and practice shots using practice target

Visual Arts

- Learn about the mediums being used and the history behind the art pieces
- Connect movements to presentations containing various images, videos, and information
- Create work outside (weather permitting)

The Chemistry of Cooking

- Learn the chemistry of cooking
- The fundamental biological, chemical and physical scientific principles associated with the study of foods
- The fundamental and relevant chemistry and functionality of the major food constituents

Composing Electronic Music

- Learn the basics of recording, editing, and sound creation
- Compose original music
- Learn skills in order to continue to create electronic music in the future



Math, Science, Technology, and Leadership (MSTL)

The Mathematics, Science, Technology, and Leadership (MSTL) program at Michigan State University is a two-week summer commuter or residential program for academically talented students who are currently in grades 9 or 10 during the 2019-2020 school year.

NOTE: MST/MSTL class and workshop choices are subject to change or cancellation at the discretion of the GATE office. Such changes **DO NOT** warrant refunds or withdrawals.

We cannot guarantee placement in any of the classes or workshops offered.

Important Dates for MSTL Program

MSTL

Application deadline: May 7, 2020

Program Dates: July 12-24, 2020

July 12, 2020

1:00 – 2:30 pm

Check-in at residential hall

3:00 – 4:00 pm

Orientation for parents and students (including commuter)

July 13-17, 2020 and July 20-24, 2020

Classes held Monday – Friday

9:00 am – 5:00 pm

Lunch included for all students (including commuter)

Extended day is available for commuter students at an additional cost.

July 24, 2020 (Friday)

Around 5:00 pm

Check-out and Closing Ceremony (all students and parents)

For more information, including course descriptions, visit:

gifted.msu.edu/mstl

The MSTL program offers advanced curriculum, as well as a leadership workshop. Students will take two classes that have been designed to stimulate students to learn about new developments in mathematics, science, and technology, and to explore related career fields. Students will also take one leadership workshop which will introduce them to concepts and skills required to be a leader in their fields. See class and workshop descriptions on the following pages. Students will be asked to rank their preference of topics.

MSTL Class Options (Students will receive 2)

Molecular Biology: Bacterial Behavior and Communication

- By studying how chemotaxis works, students will discover the simple molecular mechanisms that form the building blocks of sophisticated signaling networks
- Using computer simulations, explore how signaling networks controls bacterial behaviors in complex environments

Fascinating Physics

- Learn how to effectively communicate physics concepts to others
- Learn how to apply algebra and physics to gain a better understanding of rotational motion and interference patterns produced by laser light
- Learn how to apply mathematics and computers to measure Earth's gravitational acceleration, to explore circuits with LED's, and to investigate resonant frequencies of a vibrating string

Mathematics of Machine Learning

- Learn extensive list of basic mathematical definitions and concepts needed in abstract mathematics
- Large variety of math examples and problems to work through

Number Theory

- Presents the basic techniques of mathematical proof and the logic behind them
- Will help students think like mathematicians from the very beginning
- The class will contain an extensive list of basic mathematical definitions and concepts needed in abstract mathematics

Capture your Story on Social Media

- Go through the ins and outs of media creation starting with the basics and working up to professional level
- Creating content that leads and bringing a perspective that stands out from what everyone else is doing
- Create content to tell a story for a purpose
- Learn about settings and industry standards for content creation

MSTL Workshop Options (Students will receive 1)

High School to College:

Fit and Facts to Becoming a Leader - (Ideal for rising 10th graders)

- Learn how to develop a strong resume
- Learn how to ask for letter of recommendation
- Learn from college and university admissions experts in a panel format
- Learn about IB/AP/Honors courses and dual enrollment options

Navigating Learning, Lessons, and Leadership: The Road to College - (Ideal for rising 11th graders)

- Learn what your interests are and how this translates into college applications
- Learn about college applications from university experts
- Learn about what graduate school is and what it takes to get there

Entrepreneurial Leadership

- Create a pitch deck and tell your story
- Learn about the basic of starting a business
- Gain industry professional connections



Summer Program Details

Summer Program Costs and Payment

(GUPPY, IS4GT, MST, and MSTL)

Application fee

All programs require a \$50 non-refundable application fee.

Please note that this fee must be paid **BEFORE** any information is shared or reviewed on your application.

Tuition

Please refer to acceptance letter for due date(s). Extended day is available for commuter students for an additional cost. Tuition cost breakdown is as follows.

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GUPPY

\$350 - includes lunch except July 20-24 program

(\$175 due within 7 days of billing; additional \$175 due with 14 days of billing)

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IS4GT and MST@MSU

Commuter: **\$750**

(\$375 due within 7 days of billing; additional \$375 due with 14 days of billing)

Residential: **\$1,500**

(\$750 due within 7 days of billing; additional \$750 due within 14 days of billing)

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MSTL

Commuter: **\$995** - includes lunches

Extended day is available for commuter students for an additional cost.

(\$497 due within 7 days of billing; additional \$498 due with 14 days of billing)

Residential: **\$1,950**

(\$975 due within 7 days of billing; additional \$975 due within 14 days of billing)

Students accepted within 14 days of the program start will be subject to an abbreviated payment deadline.

Financial aid

Tuition assistance from the GATE office may be available to those with financial need. Fill out the Financial Aid page of the application when you apply.

How to pay

Payments can be made online at **gifted.msu.edu/payment**. Please contact the GATE office for check submission instructions.

Other costs

(also see Summer Program FAQs; spending amounts are suggested there)

- Extended day is available to commuter students for an additional cost.
 - For out of town families for GUPPY, GATE has arranged discounted rates at local hotels. Reservation information will be distributed after the student is accepted into the program. This cost is not covered by tuition and is the responsibility of families.
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Cancellation policy

All programs, or classes within a program, may be subject to a minimum enrollment of students and may be canceled at the discretion of the GATE office. Additionally, the residential portion of the programs may be canceled if there are not enough residential students enrolled.

Refunds and drops

The application fee of \$50 is non-refundable.

- All requests for withdrawals for summer programs must be submitted in writing to the Gifted and Talented Education office via e-mail at **gifted@msu.edu**. No fees or tuition will be refunded.
 - A student may only leave the program in case of emergency. In such a case, the student should take all personal belongings with them as they will be considered withdrawn from the program. No refunds will be given.
-

Commuter vs. Residential

Residential and Commuter students are required to attend all classes. Students are not allowed to leave during any program unless there is an emergency. Students who are absent at any point during a program

(including early departure for emergencies) will be considered withdrawn from the program from that point forward and no refunds will be issued.

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Comparison of Commuter and Residential Participation in GATE Summer Programs

	Residential (R)	Commuter (C)
Academic classes	Both R and C students participate in the day's academic classes.	
Lunch	Both R and C students are provided with lunch.	
Social activities	Because residential students pay to stay overnight in the residence halls, there are additional social activities planned for them in the evenings and on the weekend.	Commuter students do not participate in evening or weekend social activities.
Program attendance	R students are not allowed to leave for the duration of the program (unless an emergency arises). Students can communicate with their families via phone and e-mail in the evenings.	C students must be dropped off and picked up during designated times. Arriving late, leaving early, or missing days of class is not allowed.

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Availability of Commuter and Residential Options for GATE Summer Programs

	Residential (R) ¹	Commuter (C)
GUPPY	No ²	Yes
IS4GT	Yes	Yes
MST@MSU	Yes	Yes
MSTL	Yes	Yes

1. Students must be at least 12 years old by the start of the program to stay in the dorms.
2. For GUPPY, families who live out of the area may stay at a local hotel. A parent must accompany their student.

Summer Program FAQs

When and where do I drop off and pick up my child?

Times, locations, and detailed information about drop-off and pick-up policies will be provided to parents and guardians well in advance of the beginning of the program via email. Alternate drop-off or pick-up times are not allowed. It is important that we make sure that every student is accounted for and safe at all times.

Can my child miss a day of class?

NO. It is against university policy for an enrolled student to leave the program early or arrive late for any reason. Courses are also incredibly rigorous, and we do not want any of our students to fall behind or feel left out. Students may only miss class for an emergency that warrants the student leaving for the remainder of the program.

Can I visit my child or take my child home on the weekend?

NO. GATE programs are closed programs, meaning that for the duration of the program there are no visits from home or trips home for the weekend.

Programs are full of fun activities, even on the evenings and weekends for residential students! For liability reasons, it is mandatory that students stay on campus for the duration of the program unless an emergency arises that warrants the student leaving for the remainder of the program.

Students will be able to text, e-mail, and call their parents and guardians at designated times, usually during evening free time.

Will my child be safe on campus and staying in the dorms?

Residential staff, also called Lead Supervisors and Resident Advisors (RAs), are trained to keep each student safe. Before the opening of the program, the residential staff receive training on rules, regulations, and safety information related to the students' welfare. RAs are selected because of their commitment to education and ability to interact well with young people.

The residential staff members live in the residence hall on the same floor as students and are on duty 24 hours a day to ensure that every camper is safe. They are responsible for providing a comfortable and friendly atmosphere in the residence hall.

Male and female students will live in separate hallways in the same residence hall.

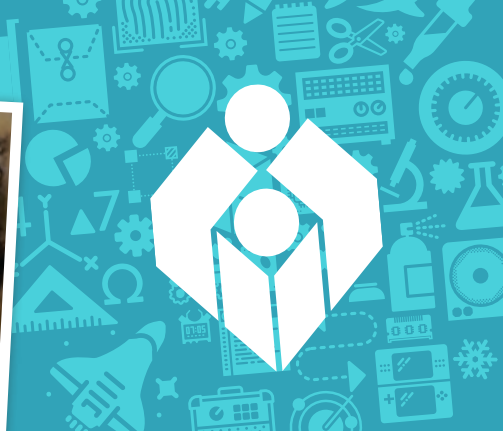


MSU Non-Discrimination Statement

MSU's Anti-Discrimination Policy prohibits acts of discrimination and harassment against any university community member(s) by inappropriately limiting employment opportunities, access to university residential facilities, or participating in educational, athletic, social, cultural, or other university activities on the basis of age, color, gender, gender identify, disability, height, marital status, national origin, political persuasion, race, religion, sexual orientation, veteran status or weight. Complaints under this policy may be submitted to the Office of Institutional Equity for investigation.

MICHIGAN STATE
UNIVERSITY





Ingham Intermediate School District

Ingham Intermediate School District is a regional educational service agency that offers programs and services to 12 public school districts, 9 public school academies, and over 44,000 students, and reaches into seven counties. Our continuum of programs and services includes summer camps to challenge young minds.

Ingham ISD Summer 2020 Programs

Register beginning March 1, 2020

Wilson Talent Center Summer Camps

The Wilson Talent Center will be hosting several summer camps in areas such as Engineering, Culinary Arts, New Media and more.

Cost: TBD

Kids' College

July 6 – 17, 2020

For students who have completed grades 4 or 5.

Kids' College is a two-week learning experience for students who are identified as having high abilities or interest in science and engineering. Students focus on inquiry-based experiences with hands-on and applied learning.

Cost: \$325

(partial/full scholarships may be available based on need)

Math Scholars University

July 6 – 17, 2020

For students who have completed grades 6 or 7.

Math Scholars University is a two-week program designed to serve students who are identified as having high abilities or interest in mathematics.

This program challenges students to develop a better understanding of mathematics through the use of problem-solving applications, mathematical reasoning and collaboration.

Held on the campus of Michigan State University, Math Scholars University is sponsored by Ingham ISD and partially funded by grants from the W. B. and Candace Thoman Foundation. Math Scholars is open to students who have completed grades 6 or 7 and show mathematical potential.

Cost: \$325

(partial/full scholarships may be available based on need)



One mission of the MSU Science Festival is to explore the many ways science, technology, engineering, art and mathematics (the STEAM disciplines) touch our everyday lives and shape our future. A broader public access to natural learning environments and to basic research and its applications is an important goal of the festival.

SCIENCE | TECHNOLOGY | ENGINEERING | ARTS | MATHEMATICS

MICHIGAN STATE UNIVERSITY

SCIENCE FESTIVAL

APRIL 1-30, 2020



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Spartan Youth Programs

**Camps, Courses, Places to Visit,
Programs, and Other Activities
for Kids of All Ages**

(Pre-K through 12th Graders)

What is SYP?

A website that displays a wide range of **exciting opportunities** for **pre-K through 12th graders** to improve their knowledge and skills in specific subject areas. Pre-college programs are an excellent way for students to explore majors or careers while being introduced to the college environment.

With **over 200 listings** covering topics in agriculture, art, business, computers, engineering, math, music, science, sports, and writing, **MSU is sure to have a program for every student!**

You can search the SYP website for:

- summer and school year programs
- opportunities to earn college credit
- residential experiences on the MSU campus
- financial assistance
- study abroad possibilities

For more information visit
spartanyouth.msu.edu

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Gifted and Talented Education
University Outreach and Engagement

Kellogg Center
219 S. Harrison Rd., Rm 8
East Lansing, MI 48824

For more information on any of our programs, please visit
GIFTED.MSU.EDU