1. **Academic Learning Compact for a Major in Mathematics**

2. **What are Academic Learning Compacts?**

Academic Learning Compacts are agreements that describe the communication skills, critical thinking skills, and content knowledge in the major (known collectively as Student Learning Outcomes) that students should acquire if they diligently follow the prescribed course of study. UF is required to assess student achievement of these Student Learning Outcomes through Individual Student Assessments (ISAs) before graduation.

Each baccalaureate degree program has formulated a set of ISAs for every major. Each set of ISAs will include satisfactory completion of the baccalaureate degree requirements and Florida statutory requirements for the CLAST test. Each major will require one or more additional ISAs to satisfactorily complete the learning compact.

DEFINITIONS:

Academic Learning Compact: UF's definition for each major of communication skills, critical thinking skills and content knowledge appropriate for that major.

Student Learning Outcomes: what students are expected to learn by completing a particular major.

Individual Students Assessments: the different ways in which UF will measure whether students have successfully completed the Learning Outcomes for a particular major. These may include a passing score on a particular test, a final project, a term paper, a portfolio, and so on. Faculty in each major have decided what the most effective means to do this is for their particular major.

3. Mathematics majors are expected to achieve proficiency in core mathematics fields (calculus, differential equations, advanced calculus, linear algebra, and abstract algebra) and to demonstrate the ability to read and construct mathematical proofs, the ability to reason in abstract mathematical systems and use mathematical models, and the ability to read new mathematics and to formulate mathematical models and arguments. Individual Student Assessments designed and administered by the Department of Mathematics will test, prior to graduation, whether these Student Learning Outcomes have been achieved.
The outcomes expected for students seeking the Bachelor of Arts degree differ from those for students seeking the Bachelor of Science degree, as is reflected in the chart below (B.S. students must take the sequence MAA 4211-12, whereas B.A. students may take either MAA 4102-03 or MAA 4211-12).

4. **Student Learning Outcomes:**

	MAC 2312 or 2512 or 3473	MAC 2313 or 3474	MAP 2302	MAS 3300 or MHF 3202	MAS 4105	MAS 4301	MAA 4102 (allowed only for B.A.)	MAA 4103 (allowed only for B.A.)	MAA 4211 (required only for B.S.)	MAA 4212 (required only for B.S.)
Content Knowledge/Skills										
1. Proficiency in core mathematics fields: calculus, differential equations, advanced calculus, linear algebra, and abstract algebra.	x	x	x		x	x	x	x	x	x
2. Ability to read and construct mathematical proofs.				x	x	x	x	x	x	x
Critical Thinking Skills										
3. Ability to reason in abstract mathematical systems and mathematical models.				x	x	x	x	x	x	x
Communication Skills										
4. Ability to read new mathematics and to formulate mathematical models and arguments.				x	x	x			x	x

5. **Individual Student Assessments:**

1. Determination of whether the requirements for the intended degree (B.A. or B.S) have been met.
2. Determination of whether Florida statutory requirements for the CLAST test have been satisfied.
3. Evaluation of responses to specific questions in final examinations in MAS 4105, MAS 4301, MAA 4103, and MAA 4212. These questions, designed to capture information

on whether the Student Learning Outcomes above have been achieved, will be graded by one or more faculty members according to department rubrics.